JOURNAL OF THE AUSTRALIAN SWIMMING COACHES & TEACHERS ASSOCIATION

SWIMMING in Australia

Volume 23. No.4
June 2007

75 yrs in swimming

Forbes Carlile

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Australian Swimming Coaches & Teachers Association

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AUSTRALIAN SWIMMING COACHES AND TEACHERS ASSOCIATION CONFERENCE

4 & 5 AUGUST 2007

THE CALOUNDRA CULTURAL CENTRE, 20 MINCHINTON ST, CALOUNDRA QLD

FEATURING:

Experts in Coaching and Teaching
Trade show displays
Pool demonstrations
ascta Qld AGM
ascta Qld Annual Awards and Presentations
ascta Qld sponsored social function

FEES:

Saturday: $80 **Sunday: $135** **Both: $175**

Inclusive of G.S.T.

NB: $20 discount per head for 5 or more attending from one swim school

UPDATE POINTS:

Teacher Re-registration:	Saturday 3.5 points	Sunday 7.5 points
ascta:	Saturday 5 points	Sunday 10 points

Saturday afternoon tea, Saturday Night Happy Hour & Sunday morning tea & lunch included in cost.

GO TO www.ascta.com FOR CONFERENCE PROGRAM AND REGISTRATION FORM

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2007/2008 Membership Registration

ascta ABN: 72 239 429 765 **TAX INVOICE** **Marsh Pty Ltd ABN: 86 004 651 512**

ascta
Australian Swimming Coaches & Teachers Association

☐ **Membership Renewal ascta ID No.**: _____ or ☐ **New Membership**

Name: _____ DOB: [dd/mm/yy] _____ ☐ Male ☐ Female

Address: _____ Suburb: _____ State: _____ PC: _____

B/H: ( ) _____ A/H: ( ) _____ Fax: ( ) _____

Mobile No.: _____ Email: _____

Code of Conduct: (Tick box)

☐ I have read, understood and agree to the **ascta** Code of Conduct, as posted on the **ascta** website. Copy also available on request.

Current Accreditation Details

Licence: ☐ **Green** ☐ **Bronze** ☐ **Silver** ☐ **Gold**

NCAS No.: _____ Expiry Date: _____

Austswim No.: _____ Expiry Date: _____

Current CPR Qual: _____ Expiry Date: _____

Swimming Club: _____ Suburb you currently coach from: _____

Do you wish to act as a mentor coach for Green and Bronze Coaches ☐ Yes ☐ No

Membership Category

(*Please select **one** category*) *For a description of member benefits, see **ascta** website.*

		GST Inclusive
☐ 1	COACH (*Voting*)	**$195.00**
☐ 2	DEVELOPMENT COACH (*Voting*) (Available only to Green or Bronze Licence Coaches who are performing their coaching duties under the guidance of Silver or Gold licensed **ascta** Coach Member) HEAD COACH NAME _____ **ascta** ID No.: _____	**$135.00**
☐ 3	CANDIDATE COACH *(Non voting)* **Registration through Green Licence Course only** Green Licence Course Code: _____ Date: _____ Location: _____	**$70.00**
☐ 4	TEACHER OF SWIMMING *(Voting)* Must hold a recognised Teacher of Swimming qualification	**$135.00**
☐ 5	TEACHER OF SWIMMING *(Non Voting)* Must hold a recognised Teacher of Swimming qualification	**$70.00**
☐ 6	ASSOCIATE MEMBER* *(Non Voting)*	**$70.00**

*** Plus Overseas Postage Surcharge (if applicable)**

☐	Oceania	$35.00	=	**$105.00**
☐	North America	$50.00	=	**$120.00**
☐	Asia	$50.00	=	**$120.00**
☐	South America	$60.00	=	**$130.00**
☐	Europe	$60.00	=	**$130.00**
☐	Africa	$60.00	=	**$130.00**

Sub Total $ _____

Plus

Marsh Insurance (*Not available to Associate Members*) **$78.00**

Personal Public Liability and Professional Indemnity Insurance for employed or volunteer swimming coaches and teachers of swimming. Coaches or Teachers operating as a business entity please contact **ascta** Insurance Brokers on 1300 305 575 for assistance in obtaining the correct insurance cover.

Total Amount Payable $ _____

Should you already have alternative PL/PI Insurance arrangements please provide details of your cover:

Insurer: _____ Policy No.: _____ Expiry date: _____

Payment

(Cheques/Money Order made payable to **ascta**)

☐ Cheque ☐ Money Order ☐ Master Card ☐ Visa Card **Amount $** _____

Card No.: _____ Expiry Date: _____

Cardholder's Name: _____ Signature: _____ Date: _____

You must read and sign the Prohibited Person Declaration form. (*Turn page over*)
Membership will not be processed unless this has been completed.

www.ascta.com
PO Box 2175, Moorabbin, VIC 3189, Australia
Phone: (03) 9556 5854 Fax: (03) 9556 5882 Email: mail@ascta.com

Prohibited Person Declaration

ascta
Australian Swimming Coaches & Teachers Association

Australian Swimming Coaches and Teacher Association (**ascta**), in conjunction with Swimming Australia Ltd. (SAL)

The SAL Member Protection Policy makes it a breach of the policy for a Prohibited Person (defined as a person who has been convicted of a Serious Sex Offence) to work or seek work in the following roles:

- As a coach or teacher of swimming who may be appointed or seeking appointment (whether employed, contracted or otherwise) for reward;
- As a volunteer appointed or seeking appointment, who will (or is likely to) come into contact with competitors or pupils under 18 years of age; and
- As a volunteer or paid person appointed or seeking appointment to a role in which that person is likely to have individual and unsupervised contact with competitors or pupils under 18 years of age (for example, a team manager).

Coaches and Teachers of swimming applying to become members of **ascta** also become members of SAL (except for **ascta** 'Associate Members') and must comply with SAL's Member Protection Policy.

ascta reserves the right to reject a membership application of otherwise qualified persons (with the exception of 'Associate Member' applications) if:

- A Prohibited Person Declaration has not been signed, or
- Where this declaration reveals the person is a Prohibited Person.

The Swimming Australia Member Protection Policy defines a Serious Sex Offence to mean an offence involving sexual activity or acts of indecency including but not limited to:

- Rape
- Indecent assault
- Sexual assault
- Assault with intent to have sexual intercourse
- Incest
- Sexual penetration of child under the age of 16
- Indecent act with child under the age of 16
- Sexual relationship with child under the age of 16
- Sexual offences against people with impaired mental functioning
- Abduction and detention
- Procuring sexual penetration by threats or fraud
- Procuring sexual penetration of child under the age of 16
- Bestiality
- Soliciting acts of sexual penetration or indecent acts
- Promoting or engaging in acts of child prostitution
- Obtaining benefits from child prostitution
- Possession of child pornography
- Publishing child pornography and indecent articles.

Declaration

I am aware that I am ineligible to work or seek work in the roles set out above if I have been convicted of a Serious Sex Offence, as defined in the Swimming Australia Member Protection Policy.

I have read and understood the above information in relation to the SAL Member Protection Policy and understand my responsibilities and obligations under it.

I declare that I am not a person prohibited under the Swimming Australia "Member Protection Policy" from working or seeking work in the roles set out above.

I acknowledge that I am required to advise the CEO of **ascta** (or the most senior employee) immediately upon becoming a Prohibited Person.

Name (please print) | **ascta** No. (current / past members)

Signature | Date

[Note: Seek legal advice if you are unsure of your status.]

Parent / Guardian Consent (in respect of person under the age of 18 years)

I have read and understood the declaration provided by my child. I confirm and warrant that the contents of the declaration provided by my child are true and correct to the best of my knowledge.

Name (please print) | **ascta** No. (if applicable)

Signature | Date

by **Kaylee George**

EDITORIAL

DEFINING SUCCESS

March saw the tumble of an incredible 15 world records at the FINA world Championships, Melbourne. What an amazing week within the swimming world.

So what defines success to you……. as an athlete, as a coach, or as an administrator??

It's the start of the new season; within the June 'Swimming in Australia' edition we look at success. Success can take so many different forms, it is so important to recognise what success is to you and develop your programs, plans and goals in line with that.

GOAL SETTING is an essential process in all facets of performance weather it be in athletic setting or business environment. Leigh Nugent takes us through the process of setting appropriate and realistic goals towards our ultimate successes.

FORBES CARLILE we look back on the beacon of swimming success that is the Carlile movement and learn from the past.

TID & DEVELOPMENT Ralph Richards takes us into the realms of talent identification and athlete development so that we can learn to determine certain physiological and psychological attributes of the youth and the future successes of Australian Swimming.

ascta continues to find relevant resources for coaches to continue to develop themselves. You can't go past the ascta legends audio series (download from www.ascta.com), Laurie Lawrence, Fores Carlile, Don Talbot and John Carew, four of Australia's legendary coaches delve into their swimming past to pass on ideas, tips and their coaching legacy to the successful coaches of the future.

So what is success to you…….

SWIMMING IN AUSTRALIA'S REGULAR CONTRIBUTORS ARE ACKNOWLEDGED WORLD LEADERS IN THEIR FIELD.

Ian Hanson is widely regarded as one of Australia's premier swimming experts having spent 20 years covering the sport for News Limited papers before taking on the role as Media Director for Swimming Australia and the Australian team in 1990. Ians most recent appointment was Media Officer for the Australian Team at this years 12th FINA World Swimming Championships.

After a career as a top level National swimmer with the Carlile club and Champion Australian surf lifesaver David Lyall is now regarded as one of the countries leading swimming writers and experts. David worked alongside Ian as Media Officer for the Australian Team at the 12th FINA World Swimming Championships.

The technical side of swimming is constantly monitored by Bernard Savage. In conjunction with his coordinating role with Swimming Australia's Sports Science Advisor Group, he keeps his finger on the pulse of the latest technical developments in our sport. His domestic network of experts includes world leading professionals in physiology, nutrition, biomechanics, physiotherapy, and psychology.

Our regular 'youth development' contributor, Leigh Nugent, is well know to Australian coaches as our current National Youth Coach. Leigh has years of experience as a Club Coach to underpin his current responsibilities, as well as first hand knowledge of what it takes for swimmers to successfully advance to elite level (Leigh was our Head Coach at the Athens Olympic Games).

In addition to his regular editorial contribution, Dr Ralph Richards, provides a number of technical articles covering a range of topics. Ralph's background is so diverse (Club and Olympic Coach, sport scientist and educator) that he has an extensive portfolio of publications to his credit.

In the learn-to-swim area, Ross Gage is supported by a vast network of professionals working hard to keep Australia at the forefront of teaching methodology.

ascta PRODUCES A 'WORLD CLASS' MAGAZINE TO MEET THE NEEDS OF OUR MEMBERS – WE COULD NOT DO THIS WITHOUT SIGNIFICANT CONTRIBUTIONS FROM SO MANY OF OUR MEMBERS.

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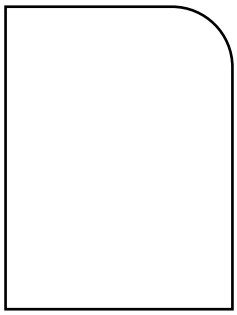

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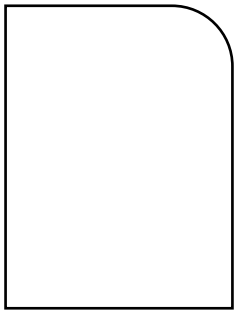

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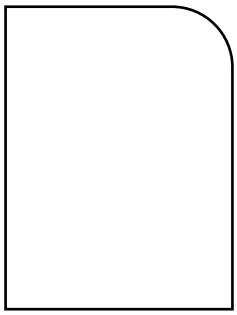

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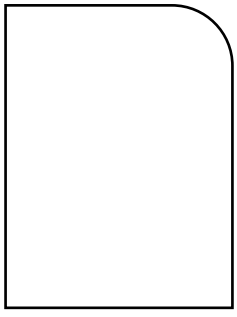

FEATURES

HIGH PERFORMANCE

YOUTH DEVELOPMENT

DEVELOPING THE SWIM INDUSTRY

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Photography:

Acknowledgements to Swimming Australia/Delly Carr Images, Hanson Sports Media, News Ltd, Neil Hodge, Ross Gage, Ingrid.

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AUSTRALIAN SWIMMING COACHES AND TEACHERS ASSOCIATION (VICTORIAN BRANCH)

Victoria

Professional Development Conference & Expo

SATURDAY 14TH & SUNDAY 15TH JULY, 2007

Registration Information
Mentone Grammar School-Como Parade Mentone (Mel Ref 87 7A)

COACHING STREAM

The **ascta** Victoria Conference is the highlight of the Swimming Coaches and Teachers year. Again we have a vast array of coaching experience at both National and State level. This years presenters include some of Australia's leading coaches such as Leigh Nugent, Ian Pope, Rohan Taylor just to name a few

TEACHING STREAM

This year's component of the conference combines all aspects of "Learn to Swim" from infants to Advanced Babies to Advanced swimmers. This year's presenters have a wealth of experience to impart to you and these presenters include Anita Killmier, Shawn Read, Ted Tullberg and Jennifer Schembri-Portelli.

MANAGEMENT (SUNDAY ONLY)

Providing important professional development to senior teachers, managers and Swim School Owners and Operators, a chance to refine your skills with the ability to be more effective at your workplace

FREE CPR UPDATE for the first 50 full registrations who indicate they wish to update.

NEW CONFERENCE FORMAT

SAT JULY 14TH, 5.00-7.00PM

$20 INCLUDES FINGER FOOD, BEER, WINE AND SOFT DRINK

MENTONE GRAMMAR FUNCTION CENTRE

BOOKINGS ARE ESSENTIAL

GO TO www.ascta.com FOR CONFERENCE PROGRAM AND REGISTRATION FORM

For further information and registration details please contact David Wilson
w: 03 9850 9080, m: 0418 994 189, e: david.wilson@swimcentre.com

From the CEOs Desk

by **Dr Ralph Richards CEO**

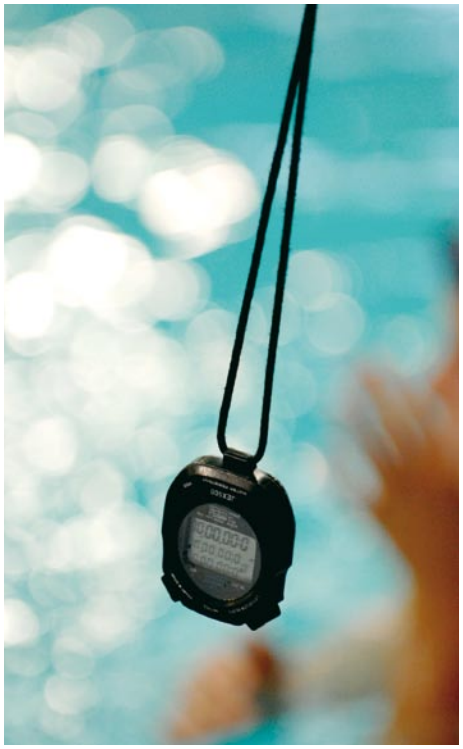
THE 2007 EDITION OF ascta's ANNUAL CONVENTION AND TRADE EXPO WAS A HUGE SUCCESS. THE COACHING AND TEACHING STREAMS CONTINUE TO SUBTLETY CHANGE, WHILE RETAINING CORE CONTENT.
We are very fortunate to attract Australian presenters who are truly world leaders in their fields (i.e. coaches, teachers, and sport scientists).

Those **ascta** members fortunate enough to attend can be assured that few (if any) international events can compare. The **ascta** board, and specifically Ross Gage and his hard working Convention team, must be congratulated. Once again the 'Swim Australia' Conference (conducted over the final two days) attracted a full range of swim schools – from single owner/operator to multi-venue operations employing large teaching staffs. This segment of our Convention showcases **ascta's** involvement (through Swim Australia) in the swim teaching industry. The health of our competitive swimming programs relies upon a strong aquatics education base – Swim Australia has added a new dimension to the professionalism of the industry.

In conjunction with our Convention, **ascta** held its Annual General Meeting and the membership approved the final stages of our conversion from an 'incorporated association' to a 'company limited by guarantee'. The governance transition will be completed during 2007, but the day-to-day operations of **ascta** should not visibly change. Our corporate mission remains unchanged: *"As the peak professional body for the coaches and teachers of swimming, **ascta** is committed to the growth and prosperity of swimming as an essential life skill, component of health and fitness, and competitive sport. We seek to improve professional standards for swimming coaches and teachers through education, accreditation, professional development, and ethical practice."*

As a stakeholder in Swimming Australia Ltd., **ascta** seeks to drive initiatives that will help our sport to grow. At the member's forum following our AGM it was announced that **ascta** would be seeking input from our members about the need to evaluate (and possibly change) the competition structure in our sport (particularly at junior level). There are two critical issues facing our sport and they offer a significant challenge to coaches – (1) how do we retain a larger proportion of our swimmers through the age-group years, and (2) how can we guide swimmers along the athlete development pathway. Naturally, the environment a coach creates around Club involvement and squad training offers many reasons for swimmers to choose swimming and for parents to support that choice. Competitions also serve to shape a swimmer's and parent's perception (and remember perception becomes reality) of our sport. This is perhaps the best reason why we (as coaches) must objectively assess the way we structure, promote, and deliver our competition programs. Therefore, **ascta** has created a discussion page on our web site that will allow you to input your ideas and share what you are doing. Input will be taken in stages – first looking at the transitional years from learn-to-swim into squad training and intra-Club competition – what are you doing with your swimmers at this level? The second stage will look at inter-Club competition, district to state level for our junior swimmers (i.e. principally 12 years and under). The third stage will look at the best way to deliver competition to our age-group swimmers, ages 13-18. Finally, we would like your thoughts on the structure of competitions at open level and what might be done to strengthen or improve our system. At each step we will present discussion topics on our web site and then collate the information received and feed it back (though the web site) for further consideration and discussion. The overall plan is to develop a comprehensive picture of what coaches might recommend to Swimming Australia. We can then prepare our case and objectively discuss the issues identified and propose alternatives, modifications, or solutions. We plan to work through the existing stakeholder structure of Swimming Australia, this is the only way everyone can address the relevant issues and contribute to a future plan. Check out the **ascta** web site for more details, and have your say.

Dr Ralph Richards
Chief Executive Officer



12th FINA World Championships
MELBOURNE

by Ian Hanson

THE EVENT'S CATCHCRY WAS "EXPECT GREATNESS" AND THAT'S EXACTLY WHAT WE SAW AT THE 12TH FINA WORLD CHAMPIONSHIPS IN MELBOURNE.

A plethora of world records - 15 to be exact and a rampant US team that was led from the front by all time great Michael Phelps.

We witnessed the brilliance of French starlet Laure Manaudou and the rise and rise of American teen Katie Hoff.

Then there was the emergence of men like Tae Hwan Park and Oussama Mellouli who both won the first world title in their nations' history, and the dominance of the Russians in the open water events.

The Telstra Dolphins provided plenty of greatness too, with Libby Lenton doing her best Wonder Woman impression and winning five gold medals – equal to the most ever won by a female at a single World Championships.

Supporting her all the way with individual gold of their own was Leisel Jones and Jessicah Schipper, while Brenton Rickard and Eamon Sullivan confirmed the promise they have shown over the last two years by making significant breakthroughs.

In relays Australia were superb, winning three and finishing no worse than fifth across the board, our triumphant men's 4x100 metre medley team only topped by our women who smashed their own world record in the same event on the penultimate night.

There were many, many golden moments and here we remember some of the highlights of the open water competition and each day in the pool.

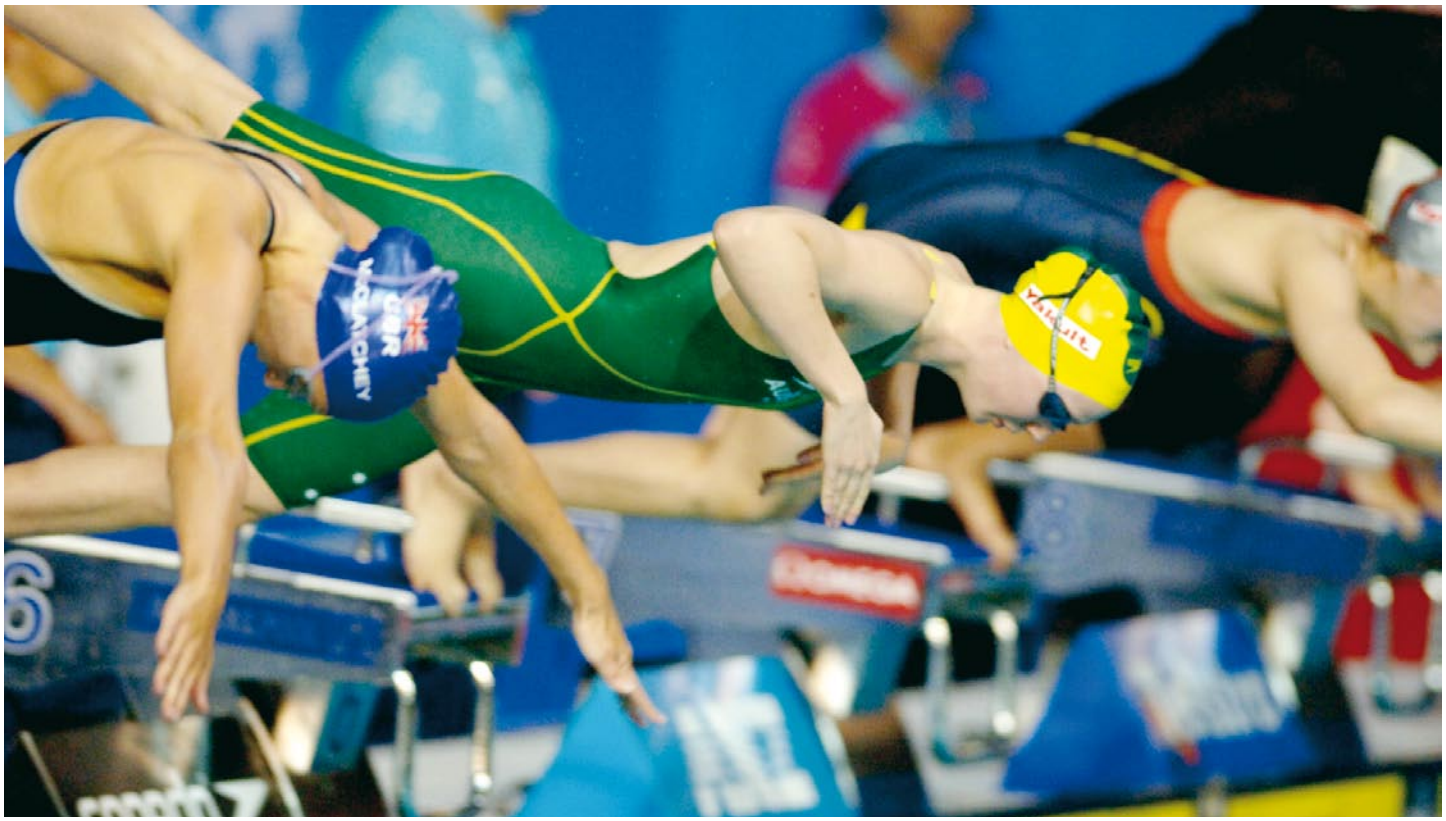
OPEN WATER – ST KILDA BEACH

The Russian team came to Melbourne with a heady reputation and they left with that status intact, claiming four of the six gold medals on offer – the other two won by Germany.

Setting the standard was teenager Larisa Ilchenko who swam two brilliant tactical races to win gold in the women's 5km and 10 km, both times relegating Aussie Kate Brookes-Peterson to third.

Other winners for Russia were Vladimir Dyatchin (men's 10km) and Yuri Kudinov (men's 25km), while Thomas Lurz (men's 5km) and Britta Corestein-Kamrau (women's 25km) collected gold for Germany.

Russia (156) claimed the Championship Trophy, awarded to the best nation across all six events, ahead of Germany (108) and Australia (54).



SWIMMING – SUSIE O'NEILL POOL, ROD LAVER ARENA

DAY 1

The first night saw Korean Tae Hwan Park and Frenchwoman Laure Manaudou win their respective 400m freestyle races and Australia and the USA split the 4x100m freestyle relays.

With 100m left in the men's 400m, Park was fifth, just over a second behind the leader Oussama Mellouli (Tunisia) but the teenage Korean was flying and in the end snatched his country's first World Championship gold in 3:44.30 from Mellouli (3:45.12) with gutsy defending champion Grant Hackett hanging on for bronze in 3:45.43. Australia's Craig Stevens was seventh in 3:48.26.

In the corresponding women's event, Olympic champion Manaudou challenged her own world record before stopping the clock in 4:02.61, the second fastest time in history. Poland's Otylia Jedrzejczak was second and became the third fastest woman in history with a 4:04.23, Japan's Ai Shibata (4:05.19) was third and Aussie Linda MacKenzie (4:07.64) was eighth.

Australia returned to the top of the women's sprint relay tree after posting the second quickest time ever recorded to take gold in the 4x100m freestyle. The team of Libby Lenton (53.42, =PB), Mel Schlanger (53.95), Shayne Reese (54.90) and Jodie Henry (53.21) defended their world title with a time of 3:35.48. The USA won silver in 3:35.68 and the Netherlands bronze in 3:36.81.

Team USA won the men's event in a new Championship record time of 3:12.72 – just 0.26 outside their own world record and presenting Michael Phelps with his first gold of the meet. Italy (3:14.04) and France (3:14.68) won the minor medals while the emerging Aussies were fifth in 3:15.89, with encouraging splits of 48.88 (Eamon Sullivan), 48.86 (Ashley Callus), 49.17 (Andrew Lauterstein) and 48.98 (Kenrick Monk).

AUSTRALIAN MEDAL HAUL – 1G, 1B
AUSTRALIAN MEDAL TOTAL – 1G, 1B

DAY 2

Who will ever forget the smile on Libby Lenton's face when she finally got a win over team mate Jessicah Schipper in the 100m butterfly?

Lenton equalled Schipper's Commonwealth record with a time of 57.15 to grab the gold and reverse the result from the 2005 World Championships. Schipper clocked 57.24 for silver and Natalie Coughlin (USA) claimed bronze in 57.34.

The planet's top three 100m breaststrokers from 2006 lined up in their final with world record holder and defending champion Brendan Hansen (USA) taking the gold from arch rival Kosuke Kitajima (JPN) in 59.80 to 59.86 with Australia's Brenton Rickard snatching the Dolphins first ever male breaststroke world championship medal in 1:00.58.

Defending champion and world record holder Roland Schoeman continued his domination of the men's 50m butterfly, touching first in 23.18 – 0.22 outside his own world mark to hold off Ian Crocker (USA) 23.47, with Denmark's Jakob Schiott Andkjaer third in 33.56.

The final event of the evening saw Aussie Stephanie Rice power to a new Commonwealth record of 2:11.42 to snatch bronze, her first World Championship medal, in the women's 200m IM. Rice was just behind American Katie Hoff (2:10.13) and Zimbabwe's Kirsty Coventry (2:10.76). Dolphin Shayne Reese was sixth in 2:14.89.

AUSTRALIAN MEDAL HAUL – 1G, 1S, 2B
AUSTRALIAN MEDAL TOTAL – 2G, 1S, 3B

© Delly Carr / Sportshoot

DAY 3

Michael Phelps successfully defended his 200m freestyle world title and in the process destroyed Australian legend Ian Thorpe's world record on what became an American record breaking party.

Phelps stunned the crowd with a scintillating time of 1:43.86 – 0.20 faster than Thorpe's WR of 1:44.06 set in Fukuoka in 2001. 2000 Olympic champion Pieter van den Hoogenband was no match, finishing second in 1:46.28, ahead of fast-finishing Korean Tae Hwan Park (1:46.73). Australia's Kenrick Monk, swimming in the biggest race of his young career, finished fourth in a PB of 1:47.12.

American glamour girl Natalie Coughlin then broke the first women's world record of the meet with a sizzling time of 59.44 in the 100m backstroke only to be followed by countrymen Aaron Peirsol who broke the men's record in the same event.

Coughlin beat France's Laure Manaudou (59.87) and Reiko Nakamura (Japan, 1:00.40), with Aussie 14-year-old Emily Seebohm a brilliant fourth in 1:00.52 and Tay Zimmer eighth in 1:02.68.

Peirsol's team mate Ryan Lochte pushed him all the way in his event but in the end it was the reigning champ in 52.98 – WR, from Lochte (USA) 53.50 and Liam Tancock (GBR) 53.61, with Matt Welsh (AUS) seventh in 54.65.

Next up and adding to the fun, Italian Federica Pellegrini clocked 1:56.47 – a surprise new world record in the women's 200m freestyle semi finals.

Defending champion Katie Ziegler (USA) went after compatriot Janet Evans' 19-year-old world record in the 1500m freestyle and fell an agonising 0.95secs short with her winning time of 15:53.05. Switzerland's Flavia Rigamonti (15:55.38) won silver and Japan's Ai Shibata (15:58.55) claimed the bronze.

By this time the crowd was anxious for an Australian success and expecting another world record. It was up to Leisel Jones and although there was no record she handled the pressure magnificently to defend her 100m breaststroke crown with a 1:05.72 to the raptures of the home fans. American Tara Kirk (1:06.34) was next, followed by Ukrainian 18-year-old Anna Khlistunova (1:07.27). Tarnee White was sixth with a time of 1:08.55.

AUSTRALIAN MEDAL HAUL – 1G
AUSTRALIAN MEDAL TOTAL – 3G, 1S, 3B

DAY 4

The "Superman" of swimming Michael Phelps left himself and the rest of the world in his wake when he destroyed his own world record, this time in the 200m butterfly – clocking an amazing 1:52.09. China's Wu Peng was second in 1:55.13, with Russia's Nikolay Skvortsov taking the bronze (1:55.22).

If Phelps was Superman, Laure Manaudou was Superwoman! Swimming from lane two, Manaudou (France) went out hard in the 200m freestyle and hung on over the last 50m to clock 1:55.52 and slash almost a second off the world record set the previous night. Germany's silver medallist Annika Lurz (1:55.68) was also under the old mark, while Federica Pellegrini (Italy) was third in 1:56.97.

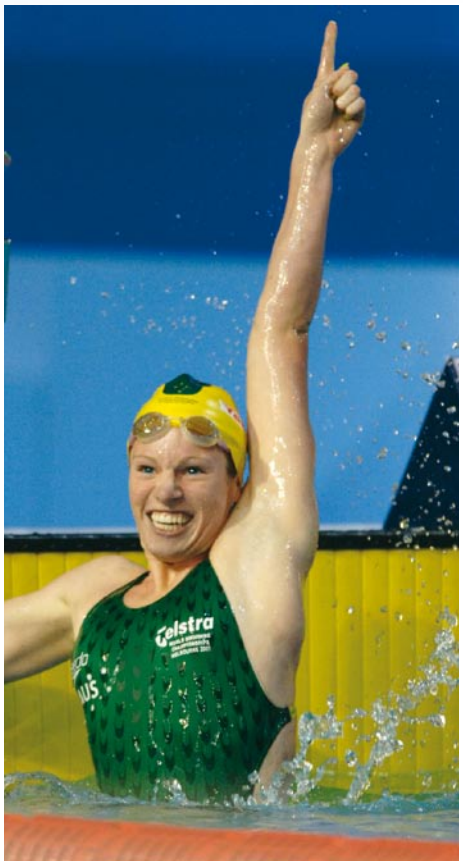
World record holder and 2001 world champion Oleg Lisogor (27.66) returned to the winner's dais in the 50m breaststroke, the Ukrainian out-touching Brendan Hansen (USA) by 0.03 with South African Cameron Van Der Burgh taking bronze in 27.88. Australia's Brenton Rickard was seventh in 28.24.

They would have been dancing in the streets of Tunisia when Oussama Mellouli won his country's first world championship gold by clocking 7:46.95 in the 800m freestyle, ahead of Poland's Przemyslaw Stanczyk (7:47.91) and Australia's Craig Stevens who claimed a very popular bronze in a PB of 7:48.67. Struggling to stay in touch, world record holder Grant Hackett faded to finish seventh in 7:55.39.

AUSTRALIAN MEDAL HAUL – 1B
AUSTRALIAN MEDAL TOTAL – 3G, 1S, 4B

DAY 5

The association between M Phelps and WR continued when the "Baltimore Bullet"



lopped 0.86 secs off his old world mark in the 200m individual medley to clock 1:54.98. His team mate Ryan Lochte finished second in 1:56.19 with Hungary's Laszlo Cseh third in 1:56.92.

Phelps may not have been there but the men's 100m freestyle was one of the races of the meet! With 10 metres to go it was anyone's gold medal and Dolphin Eamon Sullivan was right in the hunt. In a classic down to the wire finish, defending champion Fillippo Magnini (Italy) and Pan Pac champion Brent Hayden (Canada) could not be split - stopping the clock at 48.43 with Sullivan a stunning bronzed Aussie in a new PB of 48.47 – making him the second fastest Australian in history.

Jessicah Schipper finally closed the chapter on her controversial 200m butterfly defeat to Poland's Otylia Jedrzejczak at the last World Championships by snaring a well deserved gold. 'The Sparrow' went out hard and ran her opposition into the ground early before stopping the clock in 2:06.39 to hold off fast finishing American Kim Vandenberg (2:06.90) and Jedrzejczak (2:06.90).

Leila Vaziri (USA), swimming the 50m backstroke for the first time at an international meet, set a world record of 28.16 in the semis and equalled that mark to claim gold in the final. Belarus' Aliaksandra Herasimenia (28.46) was second from Aussie Tay Zimmer who posted a personal best of 28.50.

Natalie Coughlin led the US team to gold with a sterling first leg split of 1:56.43 in the women's 4x200m freestyle. The American's eventually finishing in a new world record of 7:50.09 from Germany (7:53.82) and France (7:55.96). Australia (7:56.42) - Libby Lenton (1:59.01), Jodie Henry (1:59.29), Lara Davenport (1:59.28) and Steph Rice (1:58.84) was fourth.

AUSTRALIAN MEDAL HAUL – 1G, 2B
AUSTRALIAN MEDAL TOTAL – 4G, 1S, 6B

DAY 6

The women's 100m freestyle was billed as the race of the Championships and if it wasn't it was very close. In the end Libby Lenton stormed home to win gold in a new Commonwealth record of 53.40 from early leader Marleen Veldhuis (Netherlands) in 53.70 and German world record holder Britta Steffen (53.74). Jodie Henry (54.21) placed sixth.

It was remarkable victory for Lenton who quietened any doubters she once had about her back-end race speed in the 100m.

Determined not to be left out of the golden celebration was Lenton's training partner Leisel Jones.

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The world record holder clocked a winning time of 2:21.84 in the 200m breaststroke and became the first Aussie woman to ever win a back to back world championship double. Jones thrashed Kirsty Balfour and Megan Jendrick who dead heated for the silver in 2:25.94.

Emerging Aussie star Brenton Rickard (2:10.99) almost made it a 'triumphant treble' for the Dolphins when he finished second to Japan's Olympic champion Kosuke Kitajima (2:09.80) in the men's 200m breaststroke. The pair made the most of Brendan Hansen's absence due to illness to go one-two ahead of Italy's Loris Facci (2:11.03). Rickard's result showed he has certainly arrived in a big way and his next step, Beijing, could deliver anything.

Ryan Lochte stole the limelight from his famous team mate Aaron Peirsol in the 200m backstroke to break Peirsol's existing world record, dropping it to 1:54.32. Peirsol finished second in 1:54.80 ahead of Austria's Markus Rogan (1:56.02).

In the night's final foray, the USA erased the names of Grant Hackett, Michael Klim, William Kirby and Ian Thorpe from the world record books when they clocked 7:03.24 in the 4x200m freestyle relay. Behind the might US effort, the next generation of Aussies - Patrick Murphy (1:48.55), Andrew Mewing (1:47.52), Grant Brits (1:48.21) and Kenrick Monk (1:45.77) served notice they are very much on the improve, taking silver in 7:10.05 with Canada third in 7:10.70.

AUSTRALIAN MEDAL HAUL – 2G, 2S
AUSTRALIAN MEDAL TOTAL – 6G, 3S, 6B

DAY 7

The highlight of the penultimate night's competition was without doubt the brilliant performance of the Australia women in the 4x100m medley relay. Australia not only successfully defended the world title they had won in 2005 but our 'Golden Girls' set a world record in the process - the team's third in four years. The group of Emily Seebohm (1:00.79), Leisel Jones (1:04.94), Jessicah Schipper (57.18) and Libby Lenton (52.83) combined for a time of 3:55.74 ahead of the USA (3:58.31) and China (4:01.97).

Jones' breaststroke split was the fastest ever recorded while Seebohm showed maturity beyond her years with her lead-off leg.

Sweden's Therese Alshammar (25.91) won her first world title at the age of 29 in the 50m butterfly. Australia's defending champion Danni Miatke won silver in a new Commonwealth record of 26.05, while the Netherlands' Inge Dekker (26.11) was third.

All eyes were on the next US sensation Cullen Jones and of course the clock in the men's 50m freestyle. Could anyone break Alex Popov's world record of 21.64 seconds? With just 0.40 seconds separating the top eight it was Jones' team mate Benjamin Wildman-Tobriner who got the money in 21.88 (but not the record) from Jones (21.94) with Sweden's Stefan Nystrand third in 21.97. Australia's Eamon Sullivan wasn't far away, finishing fifth in 22.05.

Former college roommates Margaret Hoelzer (USA), who was under world record pace for almost 190m, and Kirsty Coventry (Zimbabwe) claimed gold and silver in 2:07.16 and 2:07.54 respectively

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in the 200m backstroke. Japan's Reiko Nakamura (2:08.54) matched her bronze medal effort from the 100m.

The Michael Phelps show rolled on in the 100m butterfly. World record holder and defending champion Ian Crocker looked to have this one sewn up until an underwater swoop from the ever present Michael Phelps stole the gold – 50.77 to 50.82 with Venezuelan Albert Subirats Altes claiming third in 51.82.

American teenager Kate Ziegler and France's starlet Laure Manaudou staged one of the battles of the championships in the women's 800m freestyle. In the end Ziegler won in the last two strokes with a whopping PB of 8:18.52 from Manaudou's 8:18.80 and Hayley Peirsol's (USA) 8:26.41. Australian 17-year-old Kylie Palmer (8:34.96) was eighth after clocking 8:29.36 in the heats.

AUSTRALIAN MEDAL HAUL – 1G, 1S
AUSTRALIAN MEDAL TOTAL – 7G, 4S, 6B

DAY 8

The final day was chock full with thrills for the Melbourne crowd, the biggest being the Australian victory in the men's 4x100m medley relay.

The shock disqualification of the US from the morning heats left the gold medal door wide open and the Dolphins grabbed their opportunity with the combination of backstroker Matt Welsh (54.78), breaststroker Brenton Rickard (59.63), bufferflyer Andrew Lauterstein (52.63) and Eamon Sullivan (47.89) claiming the win in 3:34.93, ahead of Japan (3:35.16) and Russia (3:35.51). It was a fitting finale for the triumphant Dolphins.

The team nature of the win may have overshadowed Libby Lenton's earlier victory in the 50m freestyle but it did nothing to lesson Lenton's extraordinary achievements.

The Stephan Widmer trained speedster powered home over the last ten metres to grab the victory from Swedish veteran Therese Alshammar and Dutch favourite Marleen Veldhuis in a new personal best time of 24.53. Alshammar clocked 24.62 and Veldhuis 24.70. Jodie Henry was sixth in 24.96.

In other events on an action packed night, Grant Hackett the undisputed "Distance King" had been on "Struggle Street" all week and there was speculation he may not even defend his wobbly 1500m freestyle crown. But who was going to tip it off? After an enthralling 30 laps Poland's Mateusz Sawrymowicz (14:45.94) won the title from Russia's Yury Prilukov (14:47.29) with pre-race favourite David Davies (14:51.12) third. And there was dancing on the pool deck when Craig Stevens clocked under 15 minutes for the first time, stopping the clock at 14:59.11. "The King" was courageous in defeat in seventh in 14:59.59.

It took until the last night but someone finally stopped the Leisel Jones juggernaut too! American Jessica Hardy won the 50m breaststroke in 30.63 from Jones (30.70) and Tara Kirk (USA, 31.05). Kirk just edged out Dolphins veteran Tarnee White who was fourth in 31.14.

South African Gerhard Zandberg stood tall in the 50m backstroke – winning gold in 24.98 ahead of Thomas Rupprath (Germany) and Liam Tancock (Great Britain) with Australia's Matt Welsh eighth.

The Phelps train continued to wreak havoc on the Championships when he destroyed his own world mark in the 400m individual medley, clocking 4:06.22 – taking 2.04 secs off his winning time at the 2004 Athens Olympics. His hard-working team mate Ryan Lochte took home the silver in 4:09.77, just ahead of Italy's Luca Marin (4:09.88).

In the corresponding women's race, US superteen Katie Hoff shattered the first individual world record of her young career with a scintillating time of 4:32.89 to easily defeat Russian Yana Martynova (4:40.14) and fast finishing Australian Stephanie Rice (4:41.19, PB). Rice just touched out fellow Aussie Jen Reilly who was fourth in 4:41.53.

AUSTRALIAN MEDAL HAUL – 2G, 1S, 1B
AUSTRALIAN MEDAL TOTAL – 9G, 5S, 7B

Behind the scenes

by Ian Hanson

Behind every good athletic performance is always plenty of hard work and planning, hours of the proverbial 'blood, sweat and tears' and countless people who in some way contribute to the success of the individual or team.

The Telstra Dolphins Australian Swim Team is no different, either as a team or for each of the individual athletes that swim for it.

To reach the level required to compete for Australia at a World Championships takes a considerable standard of commitment and talent from both swimmer and coach and all those in each individual's support network.

In a team environment that basic standard is the same and like any well oiled machine, the team is only as strong as its weakest leg.

The effort and support behind the scenes that goes into a gold medal winning performance is something the public never sees and something that would open the eyes of even the most dedicated fan.

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Here the Swimming in Australia Journal takes an exclusive inside look at what an athlete does 'behind closed doors', the steps that each competitor takes to reach the performance they are looking for and the people involved.

For the purpose of this exercise we will follow what is a pretty typical 'day at the office' for breaststroke superstar Leisel Jones. As is the case at most levels of elite sport, no day is exactly the same and each athlete prepares in a slightly different way.

It's 5pm on the third night of the World Championships and the Telstra Dolphins have just had an inspiring team meeting at their hotel.

Star breaststroker Leisel Jones is preparing to defend her 100 metre title and world record and is discussing with her coach Stephan Widmer which bus she will catch to the Rod Laver Arena. Team Operations Manager Matt Sebbens has worked hard with M2007 organisers to ensure the Australian Team has access to several shuttle buses at regular times throughout the meet.

Tonight Leisel's event is the last on the program and so she doesn't need to head straight to the pool after the team meeting. Once the time for departure has been locked away Widmer informs Media Manager Dave Lyall who puts a call through to Channel Nine's broadcast executive producer Lesley Tapsall to let her know what time Jones will arrive at the pool. Nine are filming many of the Dolphins' arrivals to finals sessions and tonight Jones is set to be the star.

Leisel grabs the 6.08pm bus and arrives at the pool a little after 6.30pm, gives the waiting Channel Nine camera a smile and heads into the swimmers entrance to Rod Laver Arena.

From here it is a veritable rabbit warren of corridor's, press rooms and athlete areas, all punctuated by the smell of chlorine, the clutter of nerves and the anticipation of something special. It is the same every night of the eight day meet.

Leisel heads into the warm up/down pool which sits perched over the

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indoor practice courts of the Southern hemisphere's premier tennis facility and is a sanctuary from the media and public.

Right up the back corner and watched over by Security Manager Danny Williams in the Australian's Team Area, a ten metre by three metre block that is nestled in between the Dutch team and the event's communal medical facility.

If the Telstra Dolphins were a battle ship, this area would be the engine room.

There are stretching mats covered in bags strewn over the floor, massage tables crammed together, more tables covered with energy drinks, computers and what looks like a television inside a suitcase (more on that later).

Throw in athletes, coaches and support staff and the Dolphin's team area is a hive of activity.

After chatting with a few other team members that are preparing for events in coming days and passing on best wishes and some well chosen words of advice to Emily Seebohm who is swimming in just a few minutes, Leisel heads over to team physio Peter Wells for a quick look at her knee.

There are no major issues so Leisel now makes her way to the warm up pool and a chat with Widmer. During the half hour or so that Jones goes through her warm up, a routine she has practiced and practiced ad-nauseam over many years, Head Coach Alan Thompson will check in with Widmer to see how Jones is feeling.

Once warm up is complete Leisel heads off to change into her Speedo Fastskin in one of two athlete change rooms in the massive complex. There is now less than 90 minutes until show time.

Jones spends the next hour or so watching other races on the warm up pool scoreboard and joking with her team mates. She appears relaxed and ready. She mentally prepares for what she is about to do and spends some time with Team Psychologist Paul Penna.

Some last minute instructions from Widmer and Jones is off to the ready room. Team Manager Kellie McMillan, herself a former international medallist, walks Jones and team mate Tarnee White to the marshalling area where Sebbens is waiting. He will ensure any last minute problems or equipment issues are handled with a minimum of fuss while the girls concentrate on the job at hand.

From now, until the race is over, Jones is on her own. She has been here many, many times before and as she has often in the past, she will come out triumphant.

First stop after the race is a pool deck interview with Channel Nine and an emotional standing ovation from the parochial home crowd. It is a moment that Jones deserves to saviour.

After one last wave to the crowd it is off into the bowels of the former tennis court again. Next step is the Flash Zone – an area lined with television networks from around the world and almost all of whom have an interviewer who wants Jones.

Lyall is there too and he will ensure that Jones spends an appropriate amount of time with each, allowing one question here or two questions there. The process of recovery has also begun to as Jones gulps down some water.

Following every move now is a Doping Official who will not leave until Jones has given a sample much later.

After leaving the Flash Zone, Jones meets up with Team Manager Bruce Steed who has picked up her tracksuit and prepared it for her to wear at the presentation. Media Director Ian Hanson is there too. He asks Jones a few questions which she answers into a tape recorder. Hanson will relay the quotes back to the anxiously waiting media who are now craving words from Jones for the next morning's newspaper.

A quick brush through the hair and some congratulatory words from Thompson passed on via Head Manager David Wilson

and Jones is back on deck for the medal ceremony.

Following the presentation an elated Jones heads back through the inner corridors to the Mixed Zone. Here she will share more words of wisdom with the world's media, all the while under the watchful eye of Hanson.

After five minutes with reporters and more than 45 minutes after she left, Jones is back at the warm up/down pool. Widmer has already had the chance to review his charge's race with statistics and data filmed and analysed by Performance Analysts Bernard Savage and Lee Nicholson up in the grandstands and sent remotely to Physiologists David Pyne and Megan Anderson to download onto Savage's specially designed performance review kiosk.

Jones is greeted by the cheers of team mates and staff with high fives and hugs all round. Louise Falzon, the team's Dietician, is also there with offerings from her 'canteen'. There are sport's drinks, energy bars and fruit and Jones takes her pick.

But the job is not done. After a debrief with Widmer, Jones is back in the water for swim down.

Out of the water and Jones is met by Massage Therapists Paul Clinch, Tricia Jenkins and Katie Pettifer along with Physio's Brett Slocombe and Dave Moriarty who all go to work on a different part of Jones' body. Each knows their role and each will assist in the recovery process that in turn will help prepare Jones for the 200m breaststroke she will swim in less than 48 hours.

Next it is off to complete the Doping Control process with Team Doctor Susan White. After giving her sample Jones is ready to leave the pool but still her commitments aren't complete. Waiting outside are "non rights media' – media organisations who are not accredited to be inside the venue and who all want to speak with Jones for their late night news bulletins.

There is Channel Ten and Nine, Macquarie Radio and three other radio stations plus an ever growing group of online video journalists. The scene is carefully managed with an eye on the clock. Jones must make it onto the 10pm bus to make the athlete curfew imposed by Thompson.

Security Manager Sean Carroll makes sure this happens and when she sits down at 10.01pm on a bus bound for the team hotel, Jones can finally rest.

While this routine was being played out by Jones it was being mirrored by other members of the Telstra Dolphins team, with the staff mentioned above rotating through the athletes as they are required. Some swimmers would be victorious like Jones, others would be disappointed. Their level of support would remain the same.

Every coach on the team has been in action too, whether they had a swimmer racing on the night or not. Some helped the other coaches; some prepared their swimmers for the ensuing days.

On this night, like every other during the meet, every one of the 13 coaches and 21 support staff played their part in the trials and tribulations of 42 extraordinary young Australian men and women swimming for their country.

Open Water Swimming

by Greg Towle

The last few months have been very busy in Open Water Swimming, with both the FINA World Swimming Championships in March and the recent Australian Age Nationals held in Perth.

I congratulate the National OWS team on their collective performances in Melbourne, finishing 3rd on the overall OWS point score, which was an improvement on last years 4th. Particular mention must go to Kate Brookes-Peterson for her outstanding performances in both the 5km & 10km events picking up the bronze medal in both.

The increasing number of participants across all states and nationally run Open Water Swimming events this year has been fantastic and is very encouraging for the development of the sport. In addition to the overall numbers the level of competition and the standard of racing, has also improved.

Below are the participation numbers from OWS Age & Open Nationals as well as the OWS Grand Prix for the past 2 years.

OWS PARTICIPANT NUMBERS 2006/2007		
Event	**2006**	**2007**
Open Nationals	50	119
Age National	302	380
Grand Prix Series	16	31

OWS PARTICIPANT NUMBERS SPECIFIC TO THE 10KM OLYMPIC DISTANCE		
Event	**2006**	**2007**
Open Nationals	21	54
Age National	33	61

Additionally you will notice the further breakdown showing the numbers relevant to the Olympic 10km distance. These numbers are particularly important as they indicate that our swimmers and coaches are starting to adopt and train for the Olympic distance, which has traditionally been one of our weaker events internationally. This needs to continue if we are going to be successful.

As mentioned earlier, the standard of racing displayed in Open Water across the board this year was outstanding. The inclusion of many pool swimmers has definitely had a positive effect on both the speed and tactics of our races, as well as the increase in numbers has created larger packs, which is a skill that many of our swimmers need to practice. The events have been well supported from around the country, as can be seen from the top ten, club placing's for both age and opens.

Congratulations to all of these clubs and their swimmers for an outstanding open water swimming season. In particular I would like to mention the coaches, as each one of them, have taken a very proactive approach to open water swimming over the past 12 months and are proving to be instrumental in the further development of the sport in Australia.

It is interesting to note, that many of the teams which have been successful in OWS are well known and established clubs, who also have very strong pool and SWD squads. In my travels over the past 12 months there have been many concerns from coaches that it may be difficult to integrate an OWS program into the squads. This year's results should prove that this is not necessarily the case and that with a little planning, thought and commitment you can successfully implement OWS into your existing program with positive results.

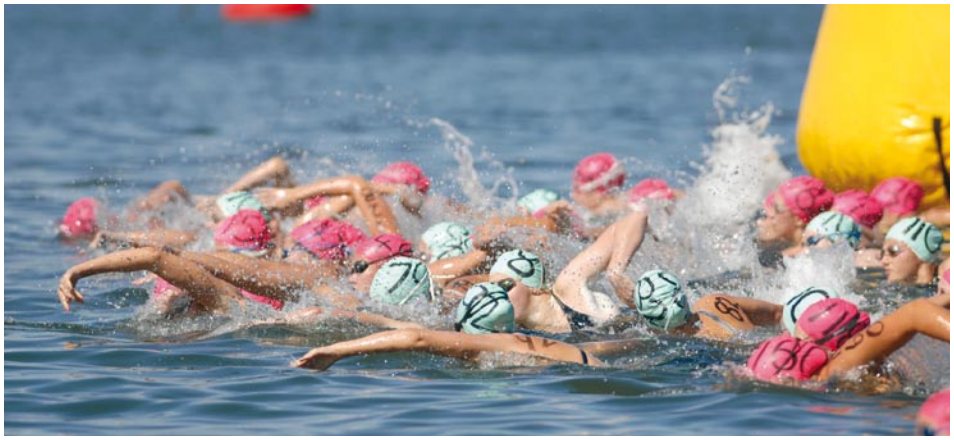
The summer of OWS we have just witnessed has created a great base for us to build on as we head into our first Olympic year. I encourage you all to challenge your swimmers and raise the bar to a new level, as we strive forward.

AGE TOP 10 CLUBS	
1. Redcliffe Leagues	(Qld)
2. Brisbane Grammar	(Qld)
3. City Of Perth	(WA)
4. Campbelltown	(NSW)
5. West Coast	(WA)
6. Dapto	(NSW)
7. Surrey Park	(VIC)
7. Carlile	(NSW)
9. Gardens	(Qld)
10. Hunter	(NSW)

OPENS TOP 10 CLUBS	
1. St Peters Western	(Qld)
2. Redcliffe Leagues	(Qld)
3. Gardens	(Qld)
4. Hunter	(NSW)
5. Miami	(Qld)
6. SOPAC	(NSW)
7. Blacktown City	(NSW)
8. Brisbane Grammar	(Qld)
9. Willoughby	(NSW)
10. City Of Perth	(WA)

CONGRATULATIONS

ST PETERS WESTERN – CHAMPION OWS CLUB 2007



Optimising Swim Turn Performance

by Andrew Lyttle

WITH TURN TIMES ACCOUNTING FOR UP TO ONE THIRD OF THE TOTAL RACE TIME, MINOR IMPROVEMENTS IN TURNING PERFORMANCE CAN LEAD TO SUBSTANTIALLY IMPROVED EVENT TIMES.

A successful swim turn results from a multitude of factors and requires a complex series of manoeuvres to optimise the total turning performance.

Many of these factors work on a trade-off basis whereby there is an optimum level for each variable. By increasing one variable, there might be a detrimental effect on other factors that also affect performance and these have to be taken into account before prescribing technique changes. Individual characteristics of the swimmer are also very important when analysing performance. This is often neglected when coaches and swimmers focus on the 'follow the leader' approach of technique analysis, attempting to mimic techniques of other elite swimmers rather than modifying the technique to suit the swimmer's attributes.

Race analysis is routinely performed during major competitions and this gives the swimmers and coaches an opportunity to see where their turns stand relative to other swimmers. This comparison can allow potential areas of inefficiencies in the turns to be highlighted (eg. Turn In Time or Breakout Distance). More specific technique analysis begins with qualitative analysis of above and below water video footage using biomechanical principles to identify specific technical faults. More advanced quantitative levels of analysis are undertaken with elite swimmers to fine-tune a swimmer's performance and provide answers to specific technical questions. This can involve the use of kinetic analysis to define the forces produced against the wall, or more advanced fluid dynamic research to provide insights into the mechanisms of propulsion. The sum of all of this information is required to efficiently optimise swimming turns in order to give a swimmer an edge that is essential in today's elite competitive swimming.

This article focuses predominantly on the tumble turn (freestyle and backstroke), however many of the points can be directly related to the breaststroke and butterfly turns.

TUMBLE TURN TECHNIQUE

The freestyle tumble turn has evolved in its current form as a result of rule changes which no longer require a hand touch during the turn. The rotation, wall contact and wall push-off used in the current freestyle tumble turn also share many similarities with the current backstroke rollover turn. Hence, results for these aspects can be translated between the stroke types. The freestyle tumble turn can be divided into the approach, rotation, wall contact, glide and stroke preparation phases. Variations of techniques are observed within each of the phases by swimmers at all levels of competition.

Approach Phase

The approach phase is important in order to maintain momentum into the wall. This phase is defined usually as beginning at a fixed distance from the wall (the Australian race analysis system now uses 5m out) and ending with both arms by the swimmer's side prior to the forward somersault. The movement of the arms by the side is accomplished either by stopping one arm at the end of the pull and waiting for the other arm to pull through and join it, or by stopping one arm at entry and allowing the other arm to catch up with it before executing a two-handed pull back to the hips. The distance out from the wall at the start of the forward somersault varies depending on the skill level and anthropometric considerations (eg. swimmer's height). A previous study on turns found that faster age-group swimmers tended to initiate their turns further out from the wall (Blanksby et al., 1996). It is crucial for this distance to be consistent for each turn to enable an effective position on the wall and it may be useful for the swimmers to use the black 'T' at the bottom of the pool as a marker rather than spend too long sighting the wall.

Rotation Phase

The rotation phase is usually initiated by bending the head and spine in conjunction with a pronounced dolphin (or freestyle) kick, which drives the head and shoulder downwards and raises the hips. The increased resistance experienced by the head and shoulders as they move out of alignment with the rest of the body, together with the propulsion produced by the final kick, causes the swimmer to somersault forward. The upper body flexes about the hips and the knees are tucked close to the chest to increases the speed of the rotation. Generally, when the body has rotated forward, the swimmer begins to twist onto their front (about the long axis of the swimmer), although there is a large variation observed in current competition. Prior to push-off, the arms are extended above the head so that the upper body is streamlined at wall contact. Maglischo (1993) subjectively believed that the swimmer should initiate wall contact predominantly on their back and then rotate on their front throughout the wall push-off and glide. Given Counsilman's (1955) findings of higher drag forces when rolling about the long axis of the body (as opposed to staying either on the swimmer's front or side); this suggestion may not be the most appropriate.

Wall Contact Phase

The wall contact phase is initiated by feet contact with the pool wall and is finished at toe-off. The swimmer's feet should hit the wall at a depth of approximately 0.3 to 0.4 m. The degree of hip and knee flexion at wall impact varies between swimmers. Previous studies have found that the straighter the legs (to a limit), the faster the turn times will be. Ideally the angle of the knee should be in the region of 110° - 120° (with 180° representing straight legs). A reduction in the angle of flexion at the knee (past 90°) places the quadriceps muscle group (the prime muscle group in the wall push-off) at an inefficient muscle length and this in turn inhibits their ability to produce force quickly. Another advantage of a greater knee angle (ie. less flexion) is that the swimmer has to swim less distance before turning and this can result in significant savings on time and

energy over multiple turns. Flexing the knees to any great degree after contact will result in a dissipation of any stored elastic energy and an increase in the passive wall contact phase, both of which should be discouraged. Another disadvantage of excessive knee bend is that the swimmer is trying to accelerate themselves in a very bunched up and non-streamlined position (thereby creating extra drag forces).

The total time on the wall should be kept to a minimum, however should still be long enough to generate enough active force so the effectiveness of the push-off is not compromised. Wall contact time can be separated into the passive and active force production phases. The passive force production phase consists of the initial wall impact and any further bending of the knees experienced immediately following this (termed 'sinking into the wall' or 'settling'). This settling on the wall has limited benefit to the development of the swimmer's push-off velocity. The active force production phase consists of forceful knee extension and plantar flexion of the feet (feet pointing down) in order to create speed off the wall. To optimise the push-off, it is therefore important to minimise the passive phase and maximise the active phase while keeping the total wall contact to a minimum.

Also important when optimising the wall push-off is the way that the force is developed on the wall. There are various schools of thoughts regarding the way that swimmers should develop force on the wall (eg. hard and fast, sink in and develop force gradually etc.). Research by Lyttle and associates (1999) show that there is optimal balance required between the amount of peak push-off force, time spent pushing off the wall and the resultant peak drag that is produced. It was found that rather than hitting the wall hard and fast, it was better to develop the force gradually so that the peak force occurred later in the push-off when the swimmer is in a more streamlined position (in that way, the peak drag force acting on the swimmer will have less of an detrimental effect on the velocity).

More detailed analyses have been performed using instrumented turning boards to measure the forces applied against the wall (see Figures 1-4 courtesy of the University of Western Australia – Department of Human Movement and Exercise Science). This type of analysis should not be taken in isolation but combined with the video footage of the turn. What could be considered an efficient push-off from a kinetics (forces) point of view may be offset by poor body position and streamlining. An optimal shaped curve would consist of the force being consistently developed throughout push-off with the peak force occurring closer to take-off when the swimmer is in a more streamlined position. Curves with multiple peaks usually mean that the segment co-ordination is not optimal or that there is a substantial settling phase on the wall (eg. there is an impact phase at contact where the force generation is not being used to propel the swimmer off the wall). The following graphs show examples of force curves from the wall contact phase of turns of elite swimmers. The white line represents the propulsive force of the feet driving into the wall during push-off and the two vertical yellow lines represent foot touch and take-off respectively. The green and yellow curves represent forces in other directions and can be ignored for the purposes of this section.

Figure 1: Example of settling on the wall due to high impact forces.

Figure 2: Example of too early for peak force development – swimmer is in a non-streamlined position when peak force occurs.

Figure 3: Example of poor segment coordination leading to velocity fluctuations during push-off.

Figure 4: Example of better push-off profile where peak force occurs close to take-off where the swimmer is in a more streamlined position (a slightly more consistent increase in force initially would have been more efficient).

The position of the feet during contact on the wall is also an important feature. It is common to see swimmers either over-rotating or under-rotating, which will cause the foot placement to be either too low or too high, respectively. This will then result in the swimmer misdirecting their push-off from the wall (by shooting to the surface or to the bottom of the pool) or adopting an appropriate compensation technique (such as arching the back). The most effective use of the push-off forces occur when ankles, hip and shoulders are aligned (see Fig. 5). Ideally, the swimmer should have the trunk horizontal with the arms out in front of the body prior to the start of push-off. This has a separate advantage in that it keeps the frontal surface area as small as possible and increases streamlining during push-off. A slight negative angle may be required to get the swimmers into an ideal depth, but the direction of force should still be

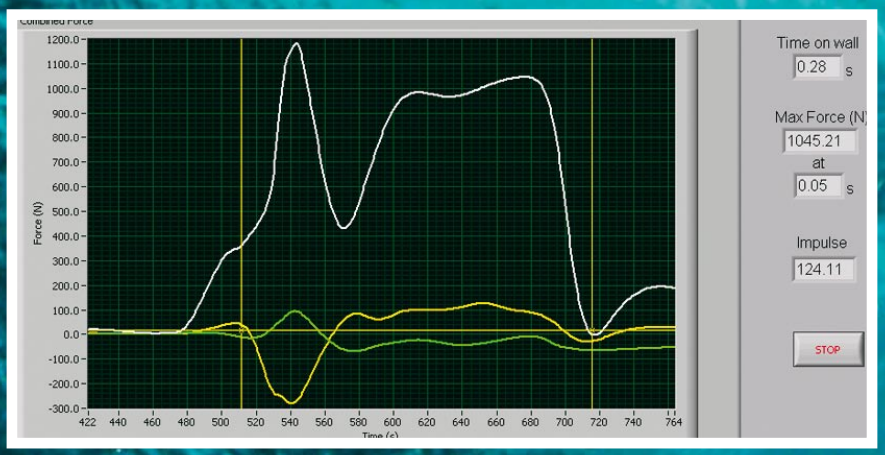


Figure 1

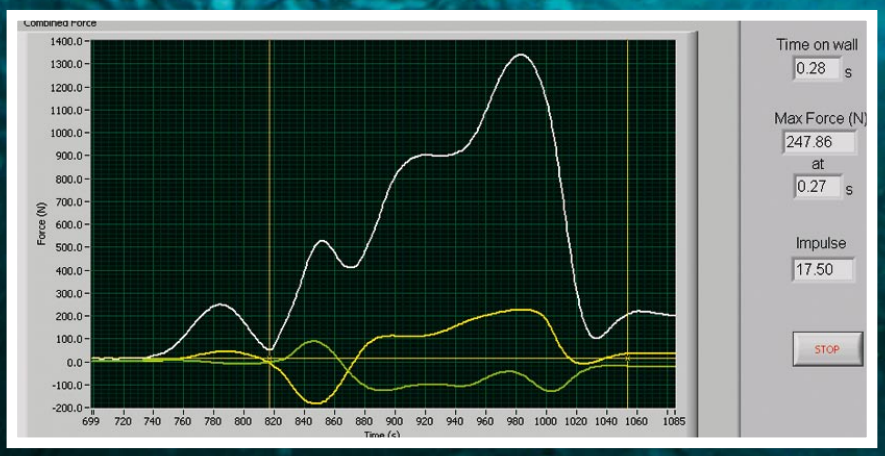


Figure 2

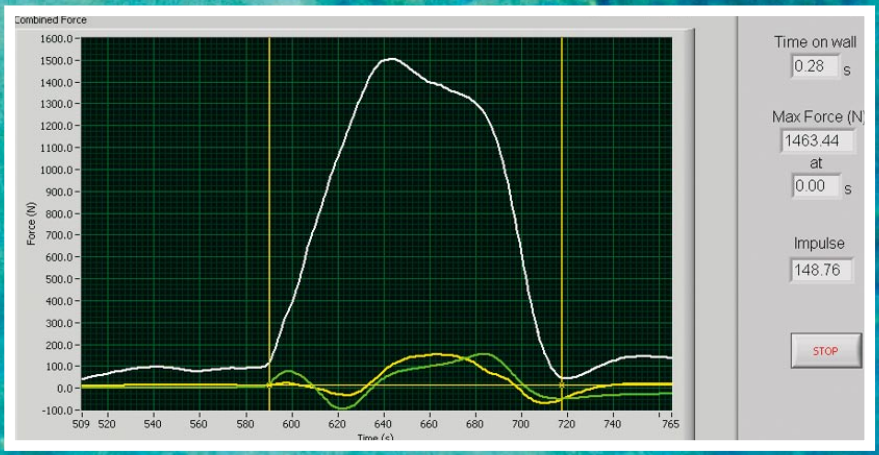


Figure 3

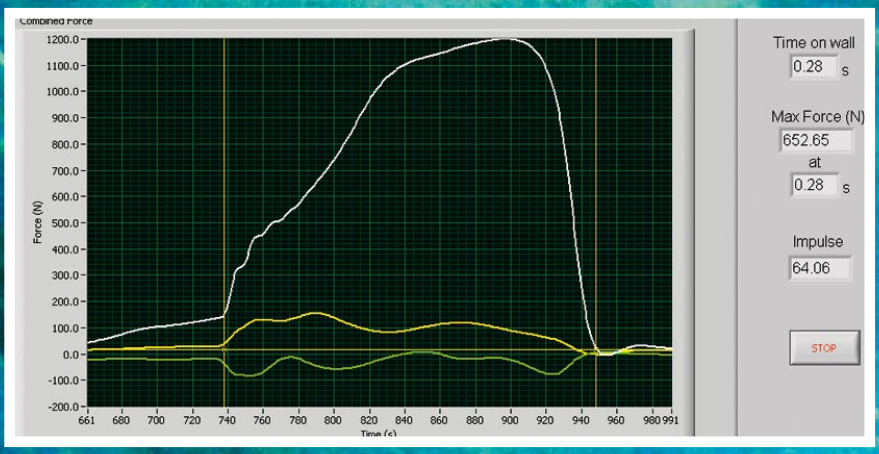


Figure 4

running through the ankles, hips and shoulders.

Figure 5: Body alignment at the start of the push off.

Glide Phase - The glide phase incorporates maintaining a streamlined position so as to minimise the resistive forces at the higher velocities. To maximize the overall efficiency of the turn, it is important to reduce the deleterious drag experienced by the swimmer during the streamlined glide. These reductions in drag will translate directly to improved turn times. Research has shown that swimmers should aim to perform their glides at a distance of between 0.4 m and 0.5 m underwater to benefit from the reduced drag forces (Lyttle et al., 1998). It should be noted that this will also be dependent on the level of turbulence around the surface of the water. This optimum depth is gradually decreased closer to stroke resumption as the drag experienced by the swimmer is related to the swimmer's velocity as well as the depth underwater. Any increase in the glide depth will not produce any substantial reductions in drag forces and despite being a popular strategy for some international level swimmers, should be discouraged. Form drag (due to the frontal surface area of the swimmer moving through the water) and wave drag (due to the energy wasted in creating wave fronts) are important components of the total drag force experienced by the swimmer and thus, it is important that the swimmer holds a good streamline throughout the glide without excess body movements. An optimal gliding technique incorporates maximising the distance achieved from the wall push-off by minimising the deceleration rate caused by the drag force. A more efficient glide depth and streamlining will result in an increased glide distance for the same time period, thereby increasing the effectiveness of the turn.

The issue of streamlining is very important, both while swimming and underwater. The velocity after push-off is the fastest that the swimmer will experience during a race (with the exception of after the dive start). As such, the ability to limit the deceleration during the glide will translate directly to improved performance and/or energy savings. Small deviations in body positions will have a large impact on the drag characteristics. Common faults during push-off and glide include:

- not having the hands together and arms fully extended above head.
- lifting (or lowering) the head.
- feet not together with toes extended.

Stroke Preparation Phase - The stroke preparation phase consists of underwater kicking prior to the first stroke cycle. Various underwater kicking styles are used in current competition and include the breaststroke, freestyle (flutter) and dolphin kick (with the swimmer on their front, side or back). The kicking style selected depends on the streamlining position used as well as the stroke. For freestyle, butterfly and backstroke, the dolphin kick has become the preferred underwater kicking style in recent years. Results from Clothier and associates (2000) demonstrated that the deceleration was less during underwater dolphin kicking than flutter kicking and the velocity above that of free swimming was maintained longer when using the dolphin kick technique. However, Lyttle and associates (2000) found no significant difference in the net forces (propulsive minus drag forces) between the underwater dolphin and flutter kicks for elite swimmers, although there was a tendency for the dolphin kicks to produce better results. The magnitude of the kick (large, slow kicks vs small, fast kicks) is an area for debate and will depend on the underwater kicking proficiency of the swimmer. Recent results using computational fluid dynamics have suggested that the large (within reason), slow dolphin kicks were more efficient than the small, fast dolphin kicks over the range of speeds used during underwater kicking.

The optimum time to initiate underwater kicking presents another area for improving turning efficiency. Observation of swimmers (of all levels) has shown that the initiation of underwater kicking can occur at any stage from immediately after wall push-off until after arm stroke resumption. Intuitively, by kicking immediately after wall push-off, the drag created by deviating from a streamline position is likely to offset any propulsive force created by kicking. Conversely, by waiting too long before initiating underwater kicking, the full benefits of the underwater kick will not be realised.

This has been confirmed while towing swimmers performing underwater kicks at velocities which are representative of those experienced during a turn. Results show that most swimmers should wait for approximately 1 sec before initiating underwater kicking (Lyttle et al., 2000; Sanders, 2003).

A similar pattern occurs in stroke resumption with studies reporting that a common problem associated with turns is that age-group swimmers frequently lose time by gliding and kicking too long or too little after the wall push-off (Blanksby et al., 1996). In the first case, the swimmers decelerated to less than their free swimming velocity and additional time and energy was required in order to regain race velocity. Conversely, when stroking was commenced too early in the glide phase, the swimmer's velocity was too high and any propulsive movements increased resistance before fully utilising the velocity advantage gained from the wall push-off. This was supported by another study who found that two-thirds of male and female age-group backstrokers did not hold the streamlined position long enough to gain optimum distance from the wall and the premature initiation of stroking resulted in an increased deceleration back to the free swimming velocity (Skender, 1997). The remaining one-third maintained the streamlined glide for too long, and this was typically a result of pushing off at too great an angle. This resulted in a return to stroking at below free swimming speed and required increased energy expenditure to regain race pace.

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Summary Points

- Ensure velocity is maintained into the turn – do not treat the lead-up as a break.
- Initiate rotation at an appropriate distance from the wall – do not turn too close.
- Body position at wall contact is important – feet should be at 30-40 cm underwater, the arms and trunk fully extended and the knees flexed at around 120˚.
- The line of action of the push-off forces should be in the direction of travel – avoid being in a position where it is necessary to arch the back to compensate for poor position during push-off.
- Maintain streamlined position as a priority throughout push-off and the glide phase - streamline depth should be around 50 cm underwater to minimise wave drag.
- Underwater kicking should not be performed too early and the swimmer should try to maintain a streamlined upper body while kicking.
- Stroke resumption should occur at race pace.

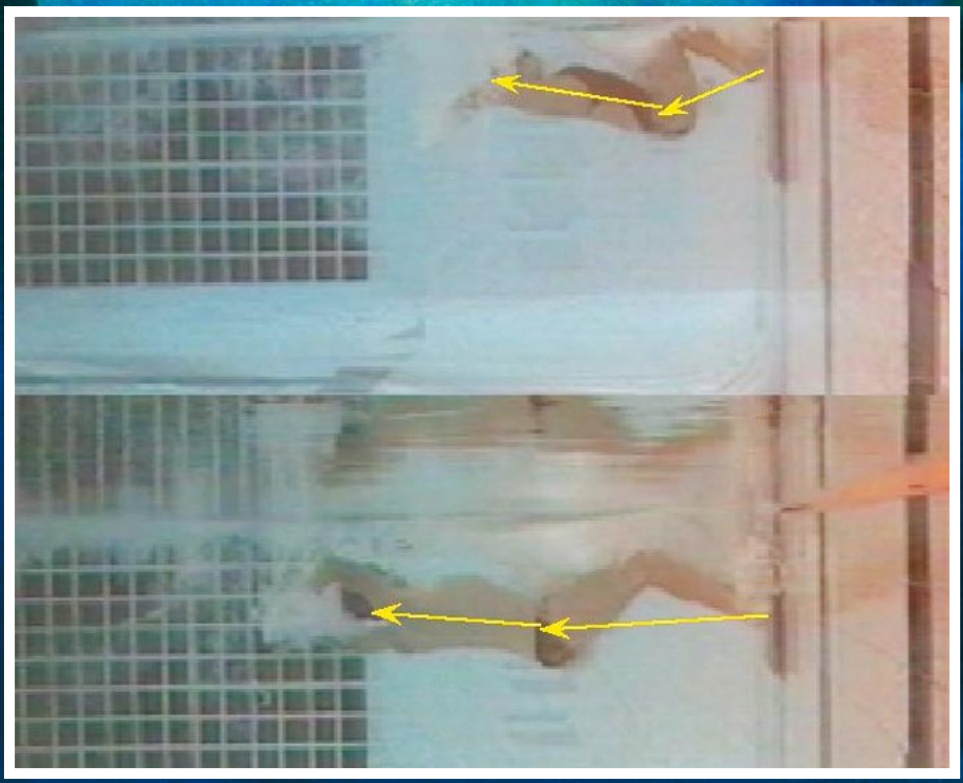

Figure 5. Body alignment at the start of the push off.

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Goal Setting

by Leigh Nugent

GOAL SETTING IS SYNONYMOUS WITH SUCCESS. IT WOULD BE SAFE TO SAY THAT NO SUCCESSFUL ATHLETE ACHIEVED WHAT HE OR SHE ACHIEVED WITHOUT SETTING GOALS THROUGHOUT THEIR CAREER.

The setting of many goals is an essential and important process in athletic performance. The inability of some athletes to effectively set goals will have without question retrogressively affected their progress or level of achievement in their chosen sport.

Establishing appropriate, realistic, chronological, challenging and measurable goals is imperative if athletes are going to have a chance of achieving their athletic potential regardless of the sport in which they participate.

WHAT IS A GOAL?

A goal can be described in a number of ways:

- A desired outcome or the end result of the implementation of a particular process.
- A prediction of a future desired outcome.
- A goal is essentially fiction until it is achieved, then it becomes reality

For most of us in swimming our goals are based on a combination of outcomes that we dream to achieve; as well as outcomes which we fell we are actually capable of achieving. In this there are elements of attainability, unlikely attainability and non-attainability

The secret to effective goal setting is identifying the attainable at its most challenging limit, which will have the effect of bring us within reach of what we may have thought to be the unattainable.

WHY DO WE SET GOALS?

We set goals to provide a clear and structured order to the process of achieving increasingly difficult results, which lead to success or the desired outcome at the conclusion of the process.

To realise the goals that we have set for ourselves we need to focus on the process. The process is the activity or the things that we do to carry us from one stepping stone goal to the next. It is the conduit to achieve our goals; in fact goals have no purpose without the process which links them.

WHAT ARE THE VARIOUS TYPES OF GOALS?

There are basically three types of Goals:

- Dream Goals
- Milestone Goals
- Stepping Stone Goals
- Process Goals

Dream Goals – are our absolute or ultimate achievement. For example winning an Olympic gold medal in world record time. Goals such as this are achieved by few but are dreamt of by many. They are dreams that fuel the involvement and provide the initial motivation for young children participating in a sport.

The dream goal is not easily forgotten and for this reason it is not necessary to write it down and stick it on the bedroom wall as a daily reminder. For some, our dream goal becomes a reality, however for most it remains a dream, but it is a vital and an important dream as it is the end point from which we work backward in planning the rest of our goals.

Milestone Goals – are the goals marking the achievements which we would like to make at various significant points in our career. They form the dots on the map of our career macro-plan.

For example:

- Make the 12/u District Team
- Make a State Championship final
- Make my first national qualifying time
- Compete at my first Australian Age Championships
- Make my first National Age final
- Win my first National Age medal
- Gain selection to the Australian Age Flippers Squad
- Make my first Australian Open Qualifying time
- Make my first Australian Open final
- Gain selection to the Telstra Dolphins Squad
- Win a National Open medal
- Gain selection to my first Australian Open Team
- Make an international open final
- Win an international medal
- Gain selection in the Australian Olympic Team
- Etc

These goals create a staged progression through our career by providing a longer term focus to the strategic points in our development. A number of these goals may be targeted within a year and others will challenged over a number of years.

Stepping Stone Goals – can crossover with milestone goals but are generally seen as goals which have much smaller jumps from one to the other when compared to milestone goals. Because of this the time period for achieving stepping stone goals is generally confined to the time frames of a seasonal preparation or a 12, month span.

Stepping stone goals involve a series of marginal improvements, which provide a challenging yet achievable progression from one goal to the next, along the stages of the pathway that leads to the next milestone.

For example:

- 1st club meet swim 1.16.00 for 100brst
- 2nd club meet (2 weeks later) swim 1.14.50
- 1st state qualifying meet (4 weeks later in hard work) swim 1.15.00. Split more even than 2nd club meet. No more than 1.5 sec drop off.
- 2nd state qualifying meet (3 weeks

later workout intensity reduced, more speed training) swim 1.13.50 Go out faster than previous meet and hold 2nd 50 at the same time.

- Taper phase Target broken 100s 1st 50 – 35.00 2nd 50 37.20
- State Championships (mile stone goal to win gold medal in 100 breaststroke). Final stepping stone goal to swim 1.12.00 - 1.12.50 for 100 breaststroke

Process goals are essential components of the process plan. The "process" is all important as described above as it is about what we do in our attempt to achieve our various goals. Process can be applied to many areas but for the purpose of this discussion let's look at the process of preparation.

The process of preparation is the performance of the detail of the preparation plan and as such process goals need to be established to build in implementation, challenges, accountability and progress of the process on a day-to-day basis. Process goals help keep us on track, provide progressive satisfaction through achievement and are the essential micro-dots that go together to constitute the bigger picture.

For example:

- Milestone goal - is to win the Australian Age Championship for the 200fs
- Stepping stone goal - is to swim 2.00.00 at the Australian Age Championship.
- Overview of the process plan is - to establish in the swimmer an aerobic and an anaerobic capacity to train at speeds that will produce a likelihood of swimming 2.00.00 at the Australian Age Championships 16 weeks from now.
- Part of the process is - to achieve certain volumes during the first 6 weeks. The process goals for volume may be:
- week 1- 35km,
- week 2- 40km,
- week 3- 45km,
- week 4- 50km,
- week 5- 60km
- week 6- 65.km.

In line with these process, goals on volume may be process, goals in regard to being able to manage progressively more difficult training cycles:

- Week 1 may be based on 1.30 cycle/100,
- week 3 on 1.20 cycle,
- working down to 1.10 cycle by week 6.

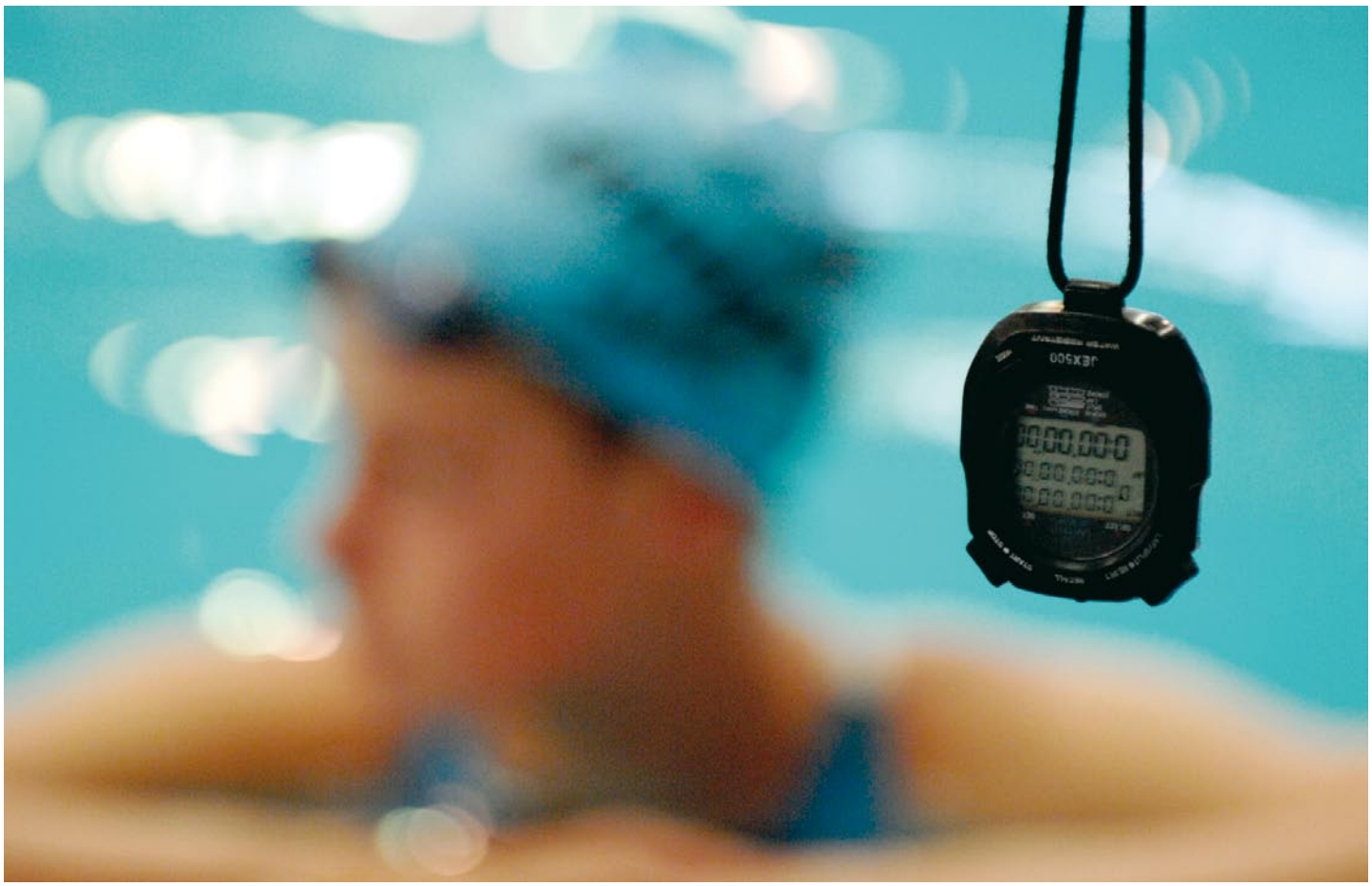
Process goals can be applied to any part of the process as desired.

HOW DO WE GO ABOUT SETTING OUR GOALS?

Goals are about the future; some are set in the immediate future, some are in the distant future and some are in-between. Because of this goals need to be developed based on a timeline; that is to say, we need to attach a goal to a certain stage or time in our development.

Goals need to be established which are commensurate with our ability and set in accordance with our projected rate of improvement.

It is essential to consult with your coach and any other experts who your coach may



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feel would be of assistance. Principally it is a process performed in partnership between the swimmer and coach.

Step 1 The Dream Goal

Step 2 Design the career plan.

Step 3 Determine the Milestone Goals according to a rough timeline.

Step 4 Establish Stepping stone Goals for the immediate 2 years.

Step 5 Develop a process which supports the season plan.

Step 6 Identify process goals which reflect the desired progression through the process.

Step 7 Evaluate

Step 8 Confirm, modify, eliminate or re-establish goals

This is the process of goal setting but its success is determined by how effectively a balance is achieved between:

- realistic optimism.
- challenges which encourage us to strive to achieve.
- exploring our limits
- our ability to objectively measuring
- alignment to an appropriate time-line
- its effect on building our character

ACHIEVING A GOAL – EMOTIONAL RESPONSE

When a goal is achieved the level of the emotional response is determined by the significance of the goal to the achiever. Positive reinforcement (positive feedback) from the swimmers coach in response to the achieving of the goal will increase the swimmer's self esteem and increase the swimmer's self belief. This will result in the swimmers belief in them achieving the next goal. Resulting in an increase in motivation to accept the challenges which lay ahead.

The level of satisfaction and sense of achievement felt by the swimmer is directly related to the perceived degree of difficulty of the goal which was achieved.

NOT ACHIEVING A GOAL – EMOTIONAL RESPONSE

Not achieving a goal may elicit a response of disappointment. The level of disappointment will be determined by how difficult the goal was perceived to be. If the goal was considered to be of extreme difficulty then rationalisation may dissipate the disappointment.

Whenever there is failure to achieve a goal then a process of objective evaluation has to take place. Through this process it can be determined whether the set goal was too difficult when it was established or whether there were other reasons or factors inhibiting the performance. The recent experience and the benefit of hind-sight will be helpful in making the decision to reinforce or modify the goal.

EFFECTS OF THE DEGREE OF DIFFICULTY OF THE GOAL

The degree of difficulty is a critical factor in:

- The achievability of the goal.
- The level of satisfaction if achieved. The more difficult the goal is to achieve the greater the level of satisfaction.
- Difficult goals pitched at the appropriate level have the effect of motivating us to strive or try harder.
- There is a fine line between making the goal hard to achieve but achievable and too hard where it is unachievable.
- It requires expertise and experience to set goals at the appropriate degree of difficulty.
- Goals which are constantly set to difficult to achieve run the risk of creating a sense of failure, dishearten the athlete and eventually reduce the desire to keep striving.

DO WE NEED HELP TO SET OUR GOALS?

Yes we do need help to set our goals especially when we are younger and lack knowledge and experience in the sport and life. It is difficult to be totally objective with our-selves.

The swimmers coach is the number one reference when establishing our goals. The coach has sport specific knowledge, experience, an understanding of rates of progression and most importantly is empathetic with our potential athletic capabilities.

Other experts can also be helpful but are secondary to the swimmer coach combination. These experts might be – strength trainers, physiotherapists, dieticians, sports psychologists, etc

Parents can be of help but usually lack the specific expertise and sometimes have difficulty maintaining objectivity.

GOALS ARE A RENEWABLE RESOURCE

Goals are not set in stone. They need to be referred to regularly and frequently because they are subject to change, which requires our goals to be flexible and renewable.

Process goals need to be referred to more frequently (often on a daily basis) than milestone or stepping stone goals, as these are the goals linked to the process of what we do from day to day and session to session. These goals are an integral part of change driven by the process.

Some goals which seemed necessary or appropriate in the past may not be so now, hence need to be eliminated or modified.

Goals are a resource to help us improve, just like the people who support you, the facility you train in and the equipment you use.

EVALUATION OF PERFORMANCE IN RELATION TO GOALS

Evaluation is an important part of the goal setting process as it is the activity which determines the future of any particular goal. Failure to carry out regular evaluation of our goals undermines the entire goal setting process, inevitably rendering it ineffective.

Accurate evaluation can only be carried out effectively provided accurate records have been kept on the swimmers competitive and training performances. Information in regard to best times for various activities is essential but just as critical are the process measurements; for example – stroke counts and stroke rates related to a particular time, best average time for a particular set etc.

Was the goal achieved or not achieved? Both objective and subjective analysis has to be carried out to perform a thorough evaluation.

If it was achieved was it achieved because it was too easy or was the process that was put in place responsible for the improvement that resulted in the achievement. If this was the case then the

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goal setting was accurate/appropriate and the developed process was correct.

An outcome as described above is an effective connection between goal setting and the implementation of process driven outcome.

HOW IMPORTANT IS THE TIME LINE?

The time line is critical to the rate of development and has the effect of applying pressure to improve at a predetermined rate. In saying this we have to consider the fact that experience tells us that swimmers vary in their rate of improvement. This is an element that we need to be mindful of when we are setting the time line.

A reasonable period of time needs to be allocated to allow the effects of the process to stimulate change, adaptation and improvement in an effort to achieve the target or goal. Only an experienced person such as the coach can determine what is an appropriate period.

Time lines need to be revisited and evaluated in response to the predicted rate of progression then adjusted according to the history of the progress. As a swimmer develops through their career the common trend is to observe rapid rates of progress early in their life, say 7 – 15 years followed by a decline in the rate from 15 years onwards. This will vary from person to person.

REVIEW AND RE-SETTING GOALS

Following the evaluation of the performances against the previously established goals comes the exercise of re-establishing or resetting the goals.

The key is to reset the goals in line with the current rate of improvement (provided that rate is acceptable to the coach). However if it is considered that the rate of improvement is likely to change then the new goals need to be set in consideration of the current rate of improvement and the possible rate of improvement.

Many factors can affect the rate of improvement; *for example:*

- The likelihood of a growth spurt.
- Imminent improvements of technique an or skills.
- Training load increases.
- Improvements of strength and power.
- Reductions of external stresses (schooling)
- Improvement of health state.

GOALS HELP US TO BE ACCOUNTABLE

Goals keep us accountable by maintain an element of pressure on us to perform, as they are usually set in relation to a minimum rate of improvement.

Through this accountability they effectively provide us with direction and encourage us to stick to a plan through adherence to the process approach.

People who side step goal setting avoid accountability and generally achieve little.

OBSESSION WITH AN OUTCOME GOAL IS DANGEROUS

Outcomes which are important to us are often associated with a milestone goal, occasionally associated with a stepping stone and rarely associated with a process goal.

Mile stone goals are a fictitious, desired outcome, related to a proposed performance in the future. Ourselves and others around us can become obsessed with achieving such a goal; this is a trap and a dangerous way to think, as it frequently ends in failure to achieve, resulting in the experience of devastating disappointment.

Once the milestone goal is determined a process to facilitate the possibility of achieving the goal is established in conjunction with a time line and an evaluation plan which is put in place.

The milestone or outcome goal is no longer the focus of the preparation as the impetus is now on the process that has been put in place to help achieve the outcome. From this point on, the time for dealing with or thinking about the outcome goal is when the evaluation of the process and the process goals are being carried out. Depending on the information considered during the evaluations the outcome goal will be changed or remain unchanged.

“The outcome will be the outcome”; this is dependent largely on how well we commit to the process. Focusing on the outcome usually has the effect of us not adhering to the required process, resulting in us achieving little.

HOW DO GOALS IMPACT ON OUR PERFORMANCE AT

- **Training**
  Goal setting for train performance involves two elements. The planned goals which are methodically established and directly linked to the process plan and the unplanned goals which are created on the spot during the training performance.

  The unplanned are the mini goals that are set by the swimmer and/or the

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coach during the session, which have the effect of stimulating the swimmer to strive for improvement. Such goals are responsible for a great deal of the training stimulus and progression. They have an effect on the evaluation of the established process goals on a day-to-day basis.

- **Competition**
  The effects of setting competition goals has been discussed already in sufficient detail, however it must be reinforced that these goals are largely a reflection of how well the process has been adhered to during the various stages of the preparation.

  Objective and accurate evaluation of these goals is imperative, because the interpretation as to how valid they were at the time of performance will have a

  bearing on the assessment of where the swimmer is at in their preparation and subsequently how they internalise the significance of their performance.

  Competition goals serve the purpose of providing stepping stones to the final competition performance of the preparation, but they must be viewed by considering the current state of readiness of the swimmer to perform.
- **Career Duration**
  Setting of milestone goals provides us with a mechanism of bringing some clarity and perspective to the likely course our career might take, the time frames that may be involved and the sequence of events which may adversely affect or bolster performance.

HOW DO GOALS AFFECT OUR SENSE OF ACHIEVEMENT?

Achieving goals is important to our self-esteem and our belief in our self, which in turn feeds our optimism and our willingness to continue striving to achieve.

The process goals are the building blocks of continued achievement. These goals provide the points for progressive achievement along the route to the major ultimate goal. It is essential to have these mini-goals help us cope with the enormity of trying to achieve the final outcome.

Conquering each little step provides a sense of achievement and movement toward achieving the end result. Our sense of achievement is fuelled by reaching each spot in a continuous line of end points, which are realistically achievable along the way to achieving what might conceivably seem to be unachievable ("the ultimate goal."), if it was viewed in isolation.

IMPORTANT INFORMATION WHEN SETTING GOALS

The knowledge of our own performances or our own history of performances and our rate of progress is a primary factor in setting our goals, that is why it is so important to record all of the information possible. In swimming we only have control over what we do, we don't have control over others.

Goals are set based on our own historical record (past performances), the rate at which we achieve, the difficulty of what we would like to achieve and the time frame in which the achievements are to be made.

The bench marks that other people set are secondary but they may be useful in helping set standards for our self by providing insights to other's performances and their rates of progress. Don't be deterred or limited by what others have achieved; remember when they started their goals were also their fiction.

SETTING APPROPRIATE GOALS

When we are young "the sky is the limit". Unfortunately age, experience and education can have the effect of shrinking our optimism, which can also be described as realism or being realistic. This can turn us into people who have a "can't do" rather than a "can do" mentality.

As we become older and become a more experienced competitor in our sport we come to position our selves (in regard to ability to perform) in relation to our competitors. This positioning can cause us to function in a negative way particularly in relation to goal setting where we in fact set goals lower than we are capable of. These goals become the ceiling of achievement and are called "self limiting" goals. They have the effect of us performing to a limited amount of our capabilities when in reality we were able to achieve well beyond these levels.

We need to avoid this type of thinking and goal setting at all costs if we are to fully explore our real capabilities.

SATISFACTION THROUGH PROCESS

Dissatisfaction With The Final Result

Dissatisfaction with the final result will only be short lived if we committed to the process because:- lasting satisfaction comes from fulfilling the requirements of the process and striving to conquer the many goals along the way to achieving the final result.

Concluding Statements

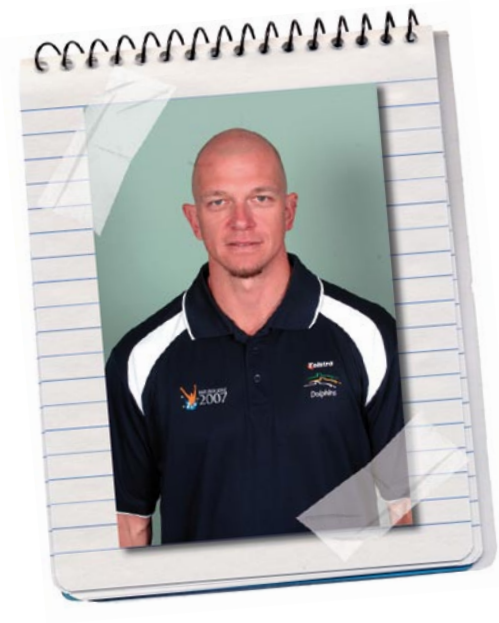
Goal setting is a very personal and private process and the choice of what we reveal or share with others is totally our own.

Revelation of what we desire to achieve can create undue pressure on our self which may inhibit our ability to perform. Added to this it can fuel the desire of our opposition to out perform us.

- Goals are goals nothing more nothing less.
- They are tools to stimulate us to strive to achieve.
- They can be created, reinforced, changed or deleted.
- They are your private fiction waiting for you to convert them into your reality.
- In the end your reality is what you do, not what you think you might do.
- Goals are in part an educated guess of what you think you might be able to achieve, and in part a fantasy of what is your dream to achieve.
- Goal setting is inescapably connected to achievement.

Talking Point

Bernard Savage



HEART RATE SETS

Please explain "heart rate sets" for different events and provide some examples.

- training at speeds that elicit maximum heart rate or VO2max
- very specific to metabolic conditions of a race
- will stimulate increases in lactate removal processes at higher intensities
- important that training speed is maintained
  - maintains the training stimulus
- rapid glycogen depletion
  - should be considered when programming and setting recovery
- increase in O2 uptake and utilisation by the muscle at higher intensities
  - increase in oxidative enzyme activity
  - higher contribution from aerobic energy sources at higher intensities
  - increases O2 kinetics
- time to attain VO2 max decreased
- specific race pace training

General Guidelines:

1. Distances: 800 - 2000 m depending on time in season and level of athlete
2. Interval distances between 50 and 300m
3. Rest: 30 seconds to 2 minutes depending on interval distance
4. Speed: 2+ seconds faster than threshold or fastest possible average
5. Total volume: 800 - 4000 m per week

SPORTS SCIENCE QUESTIONS

From your perspective what are the important questions/topics and issues coaches should be asking/discussing with sports scientists?

- Training set design and assessment
- Recovery strategies; how to recover faster between sessions
- Technical development models
- Race models; application of competition analysis to design of race models and relevance to training design
- Seasonal planning and periodisation

COACHING TECHNOLOGIES

Coaching is slowly moving out of the dark ages in regards to technologies. What would you say are the most important technologies for a swimming coach to have?

The most important technology for a coach to have is a video camera and preferably access to a computer on which to view the footage. Having a camera. A video camera greatly enhances any message the coach has on technical aspects of training. Most athletes respond significantly faster to correction if they can also see what the coach sees.

STRENGTH & CONDITIONING

What would you suggest are the guidelines to follow when setting up a strength and conditioning program for Juniors and what are the focuses for each gender?

1. Keep it simple, fun and not to long
2. Work on overall body strength and awareness
3. Ensure bi-lateral development.
4. Use some balance exercises to develop kinaesthetic awareness
5. Body weight exercise, lights medicine balls and very light weights
6. Start on shoulder stability and control exercises.
7. For juniors, there should be no difference in approach to males and females

SHOULDER INJURIES

I have a male swimmer who has constant shoulder aggravations. What should we be working on when he is out of the pool and what can we do as preventative measure?

In pool:

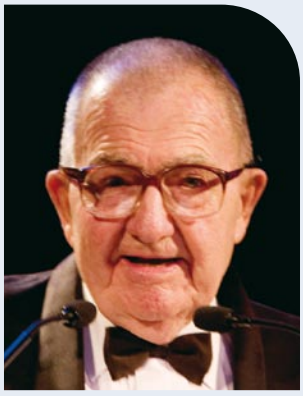
1. Basic technique parameters should be followed. Some video here would be useful to analyse in conjunction with the physiotherapist.
2. Look to assess whether it is a technique issue or is there a musculo-skeletal issues (eg flexibility) that is preventing good technique and therefore exacerbating the injury.
3. Drills to improve technique.

Out of the pool

1. Physiotherapy assessment
2. Shoulder stability and control exercises: thera-band
3. Develop functional flexibility

Next Talking Point will be Rohan Taylor, Head Coach of Carey Aquatic and National President of **ascta**. Deadline for Questions on the Forum will be the 23rd of July.

Forbes Carlile 75 years



I HAD THE PRIVILEGE OF ATTENDING FORBES CARLILE'S 75 YEARS IN SWIMMING DINNER IN SYDNEY ON MARCH 15TH AND WALKED OUT FEELING EVEN MORE PRIVILEGED TO HAVE WITNESSED THE GREATS OF OUR SPORT PRAISING FORBES BUT ALSO THE HISTORICAL FOOTAGE THAT WAS PRESENTED.

This footage reminded me that our sport has a rich history and it is that history that has paved the way for coaches and swim school owners to be able to not only make a living as professionals but also continue to provide the environments that nurture young people through passion and commitment.

The major things that stuck out to me through out the night were:

1. The passion and commitment shown by Forbes and Ursula throughout their 75 years that continues today, it showed through in all the guests who spoke, the photos shown as well as the films.
2. Structures that were put in place for learn-to-swim programs and squads by Forbes and Ursula that are still relevant to the foundations of our sport and businesses today.
3. Science and technology brought to our sport by Forbes that is now standard practice and the underwater footage in the 1960's is as clear as any other footage you can see now. If you get a chance to see footage of Shane Gould and others that succeeded under Forbes you will see similarities in their strokes that are relevant to today's champions.

The overall night was a celebration of not only a man but an organisation that has paved the way for all of us to learn what is successful in creating the right environment to grow our great sport and provide a safe, fun and positive place to learn and develop the opportunities that swimming has to offer.

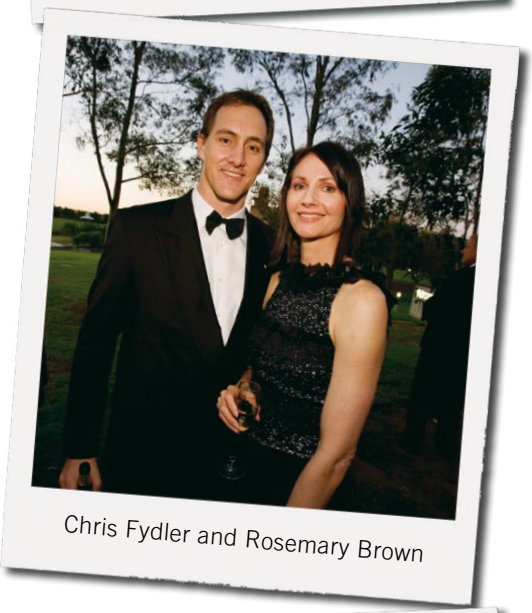
Sometimes we are all focused on looking forward and not backwards, I think in this case we all should look back at what the Carlisle organisation and Forbes have done, we might find out that what worked back then still works today:

Passion, Commitment, Structure and the ability to learn and grow

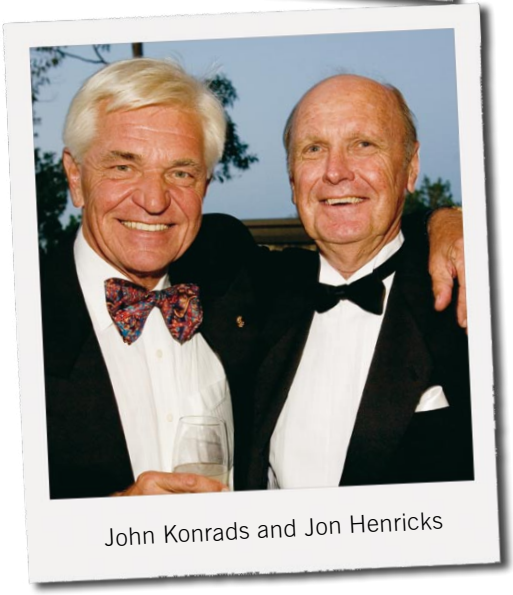
Thank You Forbes and Ursula

Rohan Taylor

John Konrads and wife Mikki



Chris Fydler and Rosemary Brown



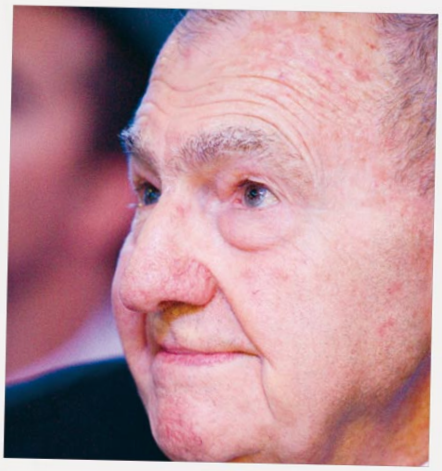
John Konrads and Jon Henricks

Sarah Ryan and friend

Nancy Lyons, Bruce Lyons and Judy Joy Davies

Shane Gould and Milt Nelms

John Konrads and Mikki, Jon and Bonnie Henricks



Forbes Carlile

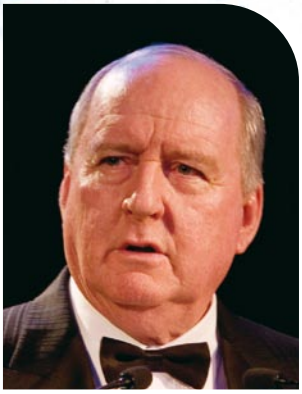
Laurie Lawrence

Forbes and Ursula Carlile

Murray Rose

John Coutts

Ursula Carlile



Forbes Carlile 75 Years in Swimming Dinner

15TH MARCH 2007, SYDNEY

TRIBUTE BY ALAN JONES, AS DELIVERED DURING ROLE AS MASTER OF CEREMONIES

IT IS TRULY MY PLEASURE TO BE HERE, TO HONOUR AND PAY TRIBUTE TO A REMARKABLE FORCE IN OUR NATION'S HISTORY. A FRIEND AND COACH TO GENERATIONS OF AUSTRALIANS.

And I'd dare to say, a man whose presence and activity over a lifetime has helped save the lives of many Australians. I've known him for longer than we'd both care to acknowledge.

As a fellow coach, respecting where he's been and what he's done. Knowing what it took to leave a footprint that clear, that definite, in our sporting history.

Forbes was only three when work started on the harbour bridge in 1924 and he was destined to have as big an impact on swimming, as our iconic bridge has had on this city. His ideas would change competitive swimming.

Relentless in pursuit of excellence. Tireless as a coach who used everything academia had to offer sport ...and tireless in applying it as a competitor himself. As he proved with a remarkable marathon in Sydney where he pushed himself so hard, that he nearly died, he was a relentless seeker of limits. Using himself as the guinea pig.

So – as a competitor – when this man asked you for something…you KNEW it wasn't something he wouldn't try himself.

Forbes Carlile was born in St. Kilda in 1921...arriving in Sydney at two months. Growing up near the Pacific Ocean in Mosman, Forbes was at first an unwilling student in his swimming lessons at Balmoral rock pool. But swimming soon became his hobby and favourite sport. Foreshadowing what would become a lifetime of achievement. A natural athlete, he'd won school colours in four sports on nine occasions and twice gained representation in the Combined GPS 1st XV. At university he won Blues for both rugby and swimming, and was the NSW Backstroke Champion.

FORBES WAS ALWAYS WILLING TO TAKE ON FINA OVER MANY ISSUES. HE HAD WHAT AMOUNTED TO A CRUSADE TO HAVE PROFESSIONAL COACHES RECOGNISED.

He started coaching and competing at a remarkable time. On the 1948 Australian Olympic Team there were seventy-seven individuals. Seven managers and the amateur swimming coach: Forbes Carlile. With the Second World War ending just three years before, these were austere times. No new stadiums…no real Olympic village; athletes were housed in army camps and converted schoolrooms. They caught the train to the pool or sometimes even thumbed a lift! But somewhere along the line at these Games, I suspect, the Australian Olympic Spirit was re-kindled.

In the middle of it all...Forbes Carlile.

We are, of course, a Continent girt by sea. And swimming pools. And to those swimming pools, and the young men and women whose hopes rested on their achievements in them, Forbes Carlile brought an uncommon, often uncanny, sense of what worked. Think about it. He saw things then about training that we only now accept as commonplace.

The history of competitive swimming, as we know it, goes back only two life spans.

Australians were innovators leading the world in the late 1890's and the first quarter of the 1900's: Freddy Lane...Alex Wickham – who in 1898 at the age of 12 became the crawl stroke model for Sydney swimmers...Dick Cavill, ...Barney Kieran... Cecil Healy...Fanny Durack...Frank Beaurepaire and later Andrew 'Boy' Charlton.

Into that legion of fame in the 1940's, came a young man with very definite ideas and a very strong set of plans to change world swimming. The boy who'd once recorded 3 out of 50 for a spelling test (which according to his school report was 'the natural result of inattention in class and neglected homework') had found a calling that got ALL of his attention.

Carlile trained swimmers have broken over 30 world records, won 13 Olympic medals and more than 50 of them have represented Australia on Olympic, World Championship and Commonwealth Games teams. For more than 60 years, Carlile swim clubs at Palm Beach, Ryde and Narrabeen have been prominent in NSW and Australian Swimming. From 1977 (when age and open Australian pointscores were first begun) until 1992, the Carlile Club achieved number 1 position 14 times out of a possible 28, and has seldom been out of the top 3. No other club has enjoyed such sustained success in the history of Australian Swimming

In just eight years, Forbes Carlile went

from attending the first post-war Olympics in 1948 in London, to be one of the four coaches of the famous Australian Swimming team which swept all before it at the 1956 Melbourne Olympics.

Forbes Carlile has been both competitor and coach. In fact we believe he is the only person in Olympic history who has been a competitor AFTER being a coach. To the best of my knowledge only 20 men and two women have represented Australia in modern pentathlon at an Olympic Games. Forbes was the first...at the Helsinki Games, in 1952.

During the 1948 Olympics, Carlile thought of training for Olympic selection, "to become Australia's first representative in Modern Pentathlon." What followed was 18 months of exhausting training and logistical nightmares across the five sports, athletics (3,000 metre run) swimming (300 metre freestyle), shooting with the pistol, cross country horse riding over 24 jumps, and fencing. The first problem encountered was acquiring a pistol license under strict NSW gun laws. Then with no riding experience he found a suitable horse, "for about twenty pounds" in Wagga Wagga... transported it to Sydney and proceeded to ride it through the city streets and over the harbour bridge one Saturday night. To help his running, Forbes trained for a marathon and in his one and only race, the Australian Marathon Championship, he finished 10th. But...in the process, he nearly killed himself. An hour after the race, he collapsed with extreme dehydration and later was diagnosed with acute kidney failure, spending six weeks in hospital. He followed his recovery with intense professional interest and recorded his physiological changes. He counts every day since September 23rd 1950...as a bonus. Once he'd recovered, he continued his Pentathlon training: finishing equal second at an Australian Championship - with the duelling sword.

He was selected for the Olympics and after training for a month with the American team at the West Point Military Academy, he was off to Helsinki, as the only civilian competitor. Finishing 25th out of 51 competitors, it is after more than 50 years one of the better results in Australia's Olympic history in Modern Pentathlon. At the core of the pentathlon… athletic and mental endurance. A perfect metaphor for Forbes. As coach, competitor and coach again.. Full circle in any sporting life.

We have a fax and a message here from Harry Gordon, Australia's foremost sports historian, who's had a total knee replacement and cannot be here tonight. While he isn't mobile enough for interstate travel yet, he has plenty to say about Forbes, the revolutionary. Harry – just let me read from his message – says:

"You deserve much credit for the revolution in Australian swimming that began at the end of the 1940's. The report you wrote as coach of the 1948 Olympic team amounted to a blueprint for future success, a success that continues today. You've been revolutionary in your methods...from hot tubs and test-tubes through T-waves.

You were revolutionary in your approach to observing elite sport from the inside.

Any good revolutionary has to be a rebel. That you have been, and when the cause was right you were happy to take on the Establishment of sport. You fought for coaches when they were being treated like pariahs. You fought for swimmers when officials wanted to omit them from Olympic teams to make way for water polo players. You fought against outmoded concepts of amateurism. I've always admired you for your attitude, your style, your dedication, your courage and your boundless enthusiasm. You and Ursula have been one of the great double acts of Australian sport."

Forbes was always willing to take on FINA over many issues. He had what amounted to a crusade to have professional coaches recognised. He wrote a book on swimming history and the science of coaching which was published in 6 languages. A prolific letter writer, faxer and emailer, his fax bill for one month alone during the 'drugs in sport' debate totalled $1,250.

Forbes is renowned for standing up for the importance and rights of coaches. A position that came from deep understanding of what the role was all about…and how vital coaches are for the very future of competitive swimming. At the 1956 Olympics, the Australian Swimming Union would not support accreditation of the coaches to go on the pool deck. Forbes, who was working as a commentator for the ABC, and the other 3 professional coaches, arranged media passes which allowed access to the pool deck.

At seven or eight his mother dragged him – that's his word – along the beach to the Balmoral Rock Pool for swimming lessons. His instructor, a sun-blackened Mr. Bince, welcomed teaching him about as much as Forbes welcomed learning to swim.

Gripped by the chin, and with an imperfect breaststroke – eventually, he became waterborne. So when it was his turn to influence hundreds, and eventually thousands in swimming pools, Forbes Carlile brought an uncommon instinct for what was needed to create a champion.

But his wider impact on swimming goes well beyond the records broken, and the champions trained. He strongly lobbied for the introduction of daily physical education in primary schools. He and Ursula travelled the globe, visiting Germany, Russia, Japan and the USA, studying their teaching techniques, absorbing it all, bringing it home and putting it into practice. And when the so called experts were saying it was a waste of time teaching children to swim until they were 7 years old, he challenged them on national television with live vision of babies swimming. And now, more than fifty years later, thousands of victories occur every day in the Carlile pools, as young Australians gain the confidence and skills to make them happier, healthier, and safer in the water.

In 1956, Forbes met a young university student Ursula Margaret Allen. Growing up in the country, Ursula had never learnt to swim, so when it became a degree requirement for Physical Education at the Adelaide University, it was decided by her parents that she would learn from Forbes Carlile. It wasn't long before they became inseparable and married in 1958. A remarkable and successful partnership endured.

Forbes life has all the qualities of a classic and much-loved Opera. Dramatic highs. Some lows. The quiet reflective moments that led to the next peak being challenged. And overcome. He's 85 this man. We are truly honoured by your presence. And this nation has been the richer for your being a member of it.

Forbes Carlile 75 Years in Swimming Dinner

HE WAS A COMPETITOR AND A COACH. A DOMINANT FORCE IN AUSTRALIAN SWIMMING FOR MORE THAN 6 DECADES.

The unique distinction of being the only person to first coach, and then compete at an Olympic Games. In 1948, Australia's youngest-ever Olympic swimming coach. Then, in 1952, Australia's first modern Pentathlon competitor at the Olympics.

He's been a swimmer, coach, innovator, academic, author, radio and TV commentator over more than 30 years, producer and director of swimming films. And a businessman...with a guiding philosophy: to protect the integrity of swimming whenever it is threatened. Somewhere along the line, he became a legend. And at 85, he's still going.

Forbes coached numerous legends; for example, Shane Gould, Jenny Turrell and Karen Moras. All household names. To them, champions all, Forbes was mentor, and friend, ally and, at times, co-conspirator.

Through it all, a remarkable partnership, with his wife, Ursula. An achiever in her own right, three times national team coach, with the distinction of becoming Australia's first female Olympic swim coach.

For much of his life, Forbes Carlile has been innovative and pro-active... a pioneer in the application of sports science to swim coaching. In all, he participated in five Olympiads. London, Helsinki, Melbourne, Rome and Tokyo. Between 1948 and 1964. And when winter set in across Australia, he and Ursula headed north to Holland and China... successfully coaching the Dutch Olympic team, and the leading Chinese swimmers. The United States was not immune from the Forbes effect either. He introduced swimming goggles to America's swimmers in the 1950's.

Passionate, Inspired. Inspiring. A true world figure in international swimming. Tens of thousands of Australians swim because of him. The embodiment of the often-used phrase with which he is credited: "To swim well is an asset for life"

His first world record holder: Judy Joy Davies… wasn't a big fan in the beginning, but soon became a disciple. At the London Olympics she won Bronze, then Gold at the Auckland Commonwealth Games. And in 1949, she broke the freestyle world record, for the mile.

OUR AIM IS NOT TO PRODUCE A CHAMPION, BUT TO CREATE AN ATMOSPHERE WHERE CHAMPIONS ARE INEVITABLE.

HOWEVER, SWIMMING IS A MEANS TO AN END... TO BUILD SELF CONFIDENCE, SELF DISCIPLINE, INTEGRITY, AND COURAGE FOR LIFE.

... THE CARLILE COACHING PHILOSOPHY

Nancy Lyons came from Brisbane and trained with Forbes at North Sydney. They even moved to Melbourne during to train at an indoor 50m pool in Richmond. It paid off. Between 1948 and 50 she was the Silver medal winner at the London Olympics and a medallist at the Auckland Commonwealth Games, in the 200m breaststroke.

John Davies saw it all. And never wavered. He finished fourth at the 1948 Olympics, and became the Gold medal winner at the 52 Olympics, after he became a Carlile pupil.

Brian Wilkinson came from the country and joined the Carlile squad...making the Australian Olympic team. He was a finalist in 1956 at Melbourne. And later broke the World Record for the 110 yards butterfly...

At 8, Russel Phegan swam with the Palm Beach Club at Nth Sydney, then was a pupil at Drummoyne during Forbes' first year there. And was a finalist at the 400 metres in the 1964 Olympic Games in Tokyo.

By the time he'd worked on them...Forbes swimmers were virtually unbeatable.

Terry Gathercole and Forbes achieved remarkable results together with Forbes first coaching Terry in West Wyalong by correspondence! And what a result...Terry became a multiple world record holder in breaststroke.

The Dutch swimmer Ada Kok saw her nation's advances in the months after Forbes and Ursula took over in 1962 and by 1964, powering to victories at the European championships...Ada breaking the world record in the 100 Butterfly.

In 1967, another Carlile swimmer, John Bennett, broke the 800m freestyle world record in a windswept Drummoyne Baths.

Forbes was everywhere.

He'd adopted a training policy of 'speed through endurance'...which was clearly successful. His swimmers doing 12 or more sessions a week. To his regret, he still doesn't think they trained as hard as Don Talbot's squad.

A pioneer of underwater photography, Forbes was at the forefront of logging what swimmers were doing under the surface. The styles of Dawn Fraser, John Devitt, John Hendricks and Murray Rose still look good today, a half a century later.

In the 1970's Forbes Carlile – trained successive multiple world record holders in Karen Moras, Shane Gould and Jenny Turrall. Forbes recalls this as the highlight of his career. It was one of the most sustained co-operative efforts in the history of swimming. Together achieving more in women's swimming than anyone who'd gone before.

Karen Moras: followed up her bronze at the 68 Olympics...breaking the world 800 metre freestyle record twice...and a year later in 1971 the world 400 metre freestyle record.

Shane Gould, with achievements that may never be repeated. Breaking the world 200 freestyle record – and five more world records within a year - to become the only swimmer to hold all freestyle world records between 100 and 1500 metres, simultaneously. The following year: Shane broke four world records...as well as winning 3 gold, 1 silver and 1 bronze at the Munich Games.

His charges, like Jenny Turrall, did distances that set new benchmarks in training. And they reaped the benefits. Jenny not only broke the 800m Freestyle world record in 1974...she went on to smash the 1500m freestyle record four times. Sally Lockyer was a mere 10th of a second behind Jenny Turrall when Jenny broke the 1500m world record in 1973.

No wonder Forbes was awarded an MBE, the Queens Jubilee Medal and inducted into the International Swimming Hall of Fame.

When the heroes of today power their way to Olympic Gold...they're not just genetically blessed, heroically determined, and trained to perfection...they're part of a long tradition… And in any language and in any endeavour that's much more than just 'gold, gold gold…'

With Professor Cotton as mentor, a solid foundation in research and visionary thinking was fostered, which became a fundamental part of the Forbes Carlile we all came to know. When Professor Cotton passed away in 1955, Forbes lost a big influence in his life and found himself at a crossroads. Leaving the University community behind, he started coaching as a professional at Drummoyne, which launched him into the occupation that would become his life's work. And change the swimming world.

Forbes studied physiological changes as they affected the performance of swimmers... he wrote research papers .... he insisted on even-paced swimming... and the use of two-beat or broken tempo kicks for long-distance events. He introduced logbooks and pace clocks, the first ever to be seen in swimming pools worldwide. His personal notes from the time could still be a coach's best-seller. Demonstrating a mind that combined and learned from history, and from science, he applied what he learned to making human beings swim faster.

The great Herb Elliott was one of Forbes' subjects

Measuring, was everything. Measuring meant performance had a base line. And improvements could be charted. Almost everything could be charted. Forbes the innovator was always introducing new techniques. He spent hours studying resistance in a university's marine testing tank.

After a suggestion from John Henrick's father, he was convinced 'shaving down' was important. So was the Australian swimming team – the benefits were not just psychological! Tapering before competition was another Cotton/ Carlile innovation.

As was heating up the muscles before a big effort.

Forbes was always an innovator. Lane ropes for circle swimming in training. Heart rate counts. Underwater filming. Lung capacities were measured. Blood tests became routine. And the results were outstanding. Forbes – as the other coaches saw – was producing phenomenal swimmers for national teams that could go anywhere and win. And they usually did.

In a nation that produces swimming champions, the coaches of those champions form a hall of fame all of their own. Formidable. Inventive. Tough. Pragmatic. Skilled. Involved. Swimming's history is written on their work. There is a tradition: and a connection. Harry Gallagher, Frank Guthrie, Sam Herford, Don Talbot, Terry Gathercole, Laurie Lawrence, and Bill Sweetenham. All great coaches. All influential. All influenced by Forbes Carlile.

Forbes opened one of Australia's first commercial swimming school in 1955. Cold water restricted children from ages five and upwards. The tidal pool refilled every weekend, with harbour seawater. Examined for signs of dead fish, jelly blubbers, rubbish, even dead rats! But when the pumps got stuck,. it wasn't uncommon for a sign to be posted on the front door reading: "Pool Closed Until Later. Dead Dog Stuck In Pump."

Forbes recognised early on that competitive swimming would not pay the bills. Warm water and indoor, heated pools were the key to good teaching. He built the first indoor teaching pool in NSW, in the backyard of his rented house in Cross Street, Ryde in 1962 …without the landlord's permission. The landlord eventually got over it, agreeing to sell the house to Forbes and Ursula – where they still live to this day.

A year-round teaching revolution had begun, with 2 year olds now having a place to learn in comfort. Eva Bory, a Hungarian Olympian, was Forbes' first teacher... with Pat Taylor, a significant contributor in the early days, following shortly after. They introduced then -revolutionary concepts such as small groups, well graded classes, structured lesson formats and the importance of learning good techniques.

And still, some 45 years after opening, more than 2000 children are enrolled at Cross Street. Quite incredible for a 12m x 6m pool. The great grandchildren of its original clients are now welcomed.

The Carliles started teaching babies at Pymble in 1966. As young as 6 months… and under the same roof as the Carlile champions of the day…giving rise to the slogan, "From Babies to Olympians"

Over the next two decades, the purchase of both Castle Cove and Killarney Heights, from former pupil Terry Gathercole, gave the business impetus…and a ready supply of well taught swimmers for the new competitive centre at Narrabeen. 2 new facilities at Norwest and Cherrybrook sees Carlile Swimming now operating out of 7 facilities in Sydney's north, employing more than 320 and teaching more than 16 000 children weekly. The new Carlile swimming pools are housed in state of the art facilities…purpose built for teaching children. They use the latest in water treatment technology and construction… providing the best environment possible for our swimmers. Carlile's well documented methods of aquatic education have won industry awards and recognition, both nationally and internationally.

In the mid 1990's, a swim school management company was created to bring together 50 years of learning and expertise to form what is now known as "The Carlile System" …It is widely recognised as an industry leader. Carlile Systems is responsible for strategic planning, financial and human resource management, branding and marketing, training systems development and delivery and facility design. Representing the present and the future of leading edge international swim school practices. Built on a legacy as enduring as the sport itself, the future of Carlile Swimming has never looked brighter.

Australia's next generation roll out the records in Perth

by **Kurt Hanson**

THE 2007 AUSTRALIAN AGE CHAMPIONSHIPS PRODUCED A LIVELY FIVE DAYS OF SWIMMING ACTION AT PERTH'S CHALLENGE STADIUM WITH NINE AUSTRALIAN AGE RECORDS, the overall pointscore to the deserved efforts of local team West Coast with the names Ellese Zalewski and Daniel Smith to the fore again, a long-standing Hayley Lewis record tumbling to emerging star Emily Seebohm and break-through swims from Albury youngster Belinda Hocking.

There was the emergence of some new names and names that may well challenge the established names for positions on next year's Olympic Team for Beijing.

Hanson Sports Media's KURT HANSON was poolside for all the action and filed this report.

AUSTRALIA'S hordes of National Age swimmers converged on Perth's Challenge Stadium, just two weeks after the conclusion of the 12th FINA World Championships.

The five-day meet saw nine Australian Age records and a stack of personal best times, showing further encouraging signs for Swimming Australia's flourishing National Youth Program.

In a powerful display in home waters, the West Coast Swimming Club, with head coach Grant Stoelwinder and National Age coach Mel Tantrum at the helm, claimed the overall pointscore victory with the locals recording a total of 1,310.50 points ahead of Gold Coast rivals, Miami (1,132) and the fast finishing Norwood club of South Australia on 1,123.

In the pool, West Coast's renowned team mentality was highlighted by relay strength across the board along with the individual efforts of its fast rising stars including versatile 15-year-old, Rebecca Blevins, who claimed five solo medals, with wins in the 200 metres individual medley and breaststroke, along with the very impressive Tommaso D'Orsogna, 16,

HELP ME! – Stephanie Rice rests on the lane rope

C-BOMB – Emily Seebohm reflects on what has been a big year

who delivered strongly in both individual medley and sprint freestyle at this meet.

An encouraging sign for Swimming Australia from the overall age group pointscore is the diversity of the clubs in the top 20 positions with the breakdown witnessing Queensland with seven clubs, NSW five, Victoria and Western Australia three and South Australia two.

And while the likes of Libby Lenton and Grant Hackett headed down their respective aisles, their younger team mates Stephanie Rice, Emily Seebohm, Bronte Barratt and Kylie Palmer continued down their respective lanes –18-year-old Rice for her final time in the Age ranks.

Rice, Australia's dual gold medallist in Melbourne, left her Age career on a high with four gold and a silver medal, including wins in the 200 and 400m IM and the 100 backstroke and butterfly and a silver in the 200m freestyle.

She showed her outstanding backstroke skills to set a new 18 years 100 metres backstroke record of 1:02.09 – making her the 10th Fastest Australian of All time.

Stephanie Rice
(St Peters Western, Qld) 18 years

1st 100m Backstroke: 1:02:09

1st 100m Butterfly: 59:42

1st 400m Individual Medley: 4:46:70

1st 200m Individual Medley: 2:15:23

2nd 200m Freestyle: 1:59:99

BELINDA JOINS BACKSTROKING RANKS

And while swimmers are putting their hats in the backstoke ring, AIS-based Albury 15-year-old Belinda Hocking, certainly showed she will be one to watch over the next 12 months with her Australian Age records in the 100m backstroke.

Hocking, who like Zalewski and Samantha Hamill, emerged as one of the stars of Australia's Junior Pan Pacific Championships and Youth Olympic Festival meets in January this year, clocked a stunning 1:01.52 in a medley relay lead off for her beloved Albury on night three of the Championships.

The Shannon Rollason trained schoolgirl, who moved to Canberra last year from her NSW country base in Albury to train alongside Olympic golden girls Jodie Henry and Alice Mills, has dropped 1.12 seconds in three swims here over the past three days.

Her swim shot her past legendary triple Olympic backstroker Nicole Livingstone whose best time of 1:01.78 was clocked at the Barcelona Olympics in 1992.

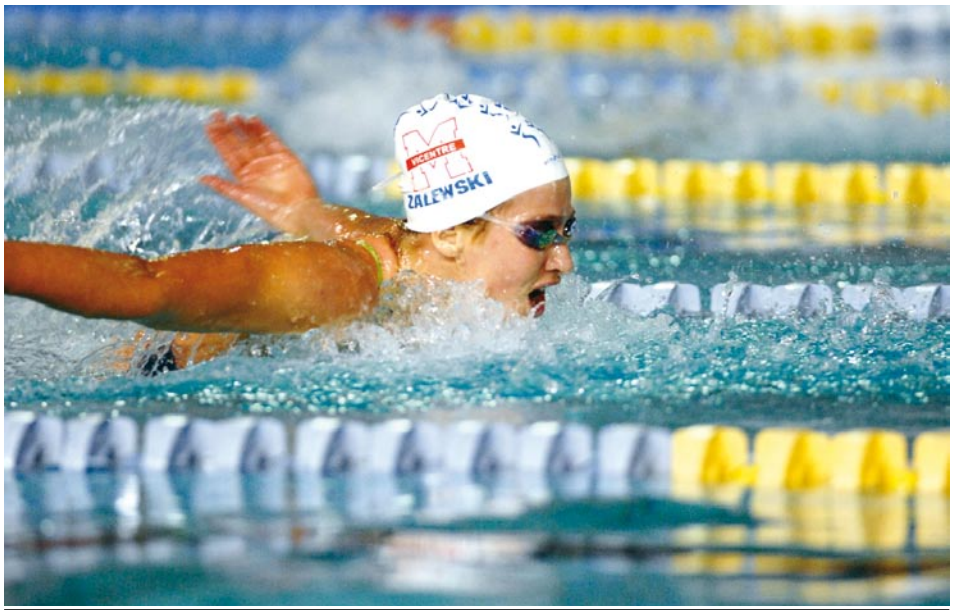
On day one of the meet Hocking clocked 1:02.30 to lower the Australian 16 years record in the 100m backstroke heats.

That night Hocking lowered the record again to 1:02.07 and wiley coach Rollason had his young charge fired up for another assault on the books tonight and what a swim she produced – continuing her amazing improvement.

EMILY LOWERS 1989 HAYLEY LEWIS MEDLEY MARK

And while Rice and Hocking were improving their backstroke, our fourth-placed World Championship swimmer, Emily Seebohm was on song in the medley, after her coach Matt Brown took the pressure off her backstroke events and set her for the 200 IM – a move that may well scare Australia's current batch of IM swimmers.

Seebohm continued her amazing 2007 when she broke an 18-year-old Australian record held by the legendary Hayley Lewis on night four of the Championships.



FLYING – Ellese Zalewski on her way to one of the six gold medals she won"

Swimming Australia's 14-year-old find of the season, put together a devastating backstroke leg in the 200m individual medley before stopping the clock in a time of 2:17.35, slicing 0.27 seconds off Lewis'14 years Australian record time - set back in 1989 - 12 months before the triple Olympian won five gold medals at the 1990 Commonwealth Games.

Lewis of course went on to win Olympic silver and bronze at the 1992 Barcelona Olympics, before contesting the 1996 and 2000 Olympics in a stellar career.

The Matthew Brown coached Seebohm, who trains out of the Brothers club at Nudgee College in Brisbane, admitted after the race the medley was the one event she and her coach had focused on here in Perth.

Seebohm has had a huge month which culminated in the lanky Queensland schoolgirl winning gold in Australia's world record breaking medley relay team at last month's FINA World Championships in Melbourne.

FAAAST – Speedster Cate Campbell checks out her time

MORE GOLD – Daniel Smith wins another gold medal

Emily Seebohm
(Brothers, Qld) 14 years

1st 100m Backstroke: 1:03:36

1st 200m Freestyle: 2:03:27

1st 200m Individual Medley: 2:17:35

1st 200m Backstroke: 2:14:59

2nd 50m Freestyle: 26:49

3rd 100m Breaststroke: 1:14:03

ZALEWSKI WINS SIX GOLD

Melbourne Vicentre's Ellese Zalewski finished the meet as the most successful individual, winning six gold medals.

The 15-year-old led all the way in the final of the 400 metres freestyle on the final night to post a time of 4:20.44 to relegate Miami team mates, Jade Neilsen (4:23.67) and Joyah Takefala (4:24.96) to the minor placings.

It followed Zalewski's wins in the 100 and 200m butterfly, 50,100 and 200m freestyle and a silver in the 200m backstroke in a busy five-day program.

"Usually my swimming is all about times but at this meet I just wasn't feeling brilliant so it became more about racing hard and putting up a fight," Zalewski said.

"My coaches just continued to tell me to treat every day as a new day and winning six gold medals no-matter what my times are is still a great achievement and a huge positive for me.

"It has been a good meet for racing and I am really looking forward to a two-to-three week break before coming back to training."

Ellese Zalewski,
(Melbourne Vicentre, VIC) – 15 years

1st 200m Butterfly: 2:14:00

1st 100m Butterfly: 1:00:69

1st 50m Freestyle: 26:21

1st 100m Freestyle: 56:99

1st 200m Freestyle: 2:02:92

1st 400m Freestyle: 4:20:44

2nd 200m Backstroke: 2:20:77

ELLEN'S EIGHT MEDALS FOR MIAMI

Miami 14-year-old Ellen Fullerton finished the meet as the leading individual medal winner with the bubbly pocket rocket

featuring in nearly everything, grabbing wins in both the 800m freestyle and 400m individual medley, silver in the 100m butterfly, 400m freestyle, 200m butterfly and 200m freestyle and third in the 200m individual medley and 200m backstroke.

Ellen Fullerton (Miami, Qld) 14 years

1st 800m Freestyle: 8:54:24

1st 400m Individual Medley: 4:54:38

2nd 100m Butterfly: 1:03:03

2nd 400m Freestyle: 4:24:40

2nd 200m Butterfly: 2:18:72

2nd 200m Freestyle: 2:04:59

3rd 200m Individual Medley: 2:19:98

3rd 200m Backstroke: 2:21:41

100M RECORD JUST GREAT FOR CATE

One of the swims of the meet came from Indooroopilly 14-year-old freestyler Cate Campbell who lowered her own Australian Age record in the event by 0.13 of a second with a brilliant swim of 56.18 after winning the 50m freestyle in 25.52.

Campbell, who made her Telstra Dolphins debut for Australia with a third placing to Libby Lenton and Kara-Lynn Joyce (USA) in the 50m freestyle at the Fujitsu Duel in the Pool against the USA two weeks ago, will take yet another personal best back to Brisbane in what has been an outstanding 2007 to date for the rising sprint sensation.

MIAMI DAN'S FIVE GOLD

Miami's Daniel Smith was the outstanding male individual winning five gold medals.

He continued his strong form with an outstanding 400m freestyle win from lane seven on the final night as the Gold Coast 15-year-old picked up his fifth victory in an impressive swim of 3:57.69 – his first ever sub four minute performance.

It completed the freestyle quadrella to the Denis Cotterell-trained teenager who also won the 200IM and took silver in the 100m butterfly.

Daniel Smith (Miami, Qld) 15 years

1st 50m Freestyle: 24:62

1st 100m Freestyle: 52:34

1st 200m Freestyle: 1:52:16

1st 400m Freestyle: 3:57:69

1st 200m Individual Medley: 2:09:39

2nd 100m Butterfly: 57:79

POTTS OF GOLD FOR AUSSIE DECLAN

The rejuvenated boy's ranks continue to impress with second placegetter, Norwood, South Australia star Declan Potts, also breaking the magical four minute mark with a swim of 3:59.47 after earlier in the meet winning the 1500m freestyle, the 400 IM and the 200m butterfly.

Potts completed the most remarkable meet of his short career with a typical gutsy 400 metre individual medley win in a time of 4:35.55.

He produced an iron man like effort to finish as the leading male medal winner with a remarkable seven in total which included gold in three of the toughest events in the program; the 1500 freestyle, 200 butterfly and 400 metres individual medley.

THE MARCH OF THE ORANGE CAPS – Swimmers prepare for the start of the 5km

THE NUMBERS GAME - Sixty-four, you don't look sixty-four

The English born all-rounder was ecstatic with his efforts here at his first Australian Age championships as a naturalised Australian after moving to Adelaide with his family in early 2006.

"It was big," was how the modest Potts described his week long campaign.

"I probably didn't do as well as I could in some of my swims because of the amount of events, it was very hard to keep focused.

"But I love the pain and I'll swim anything but my passion is with the 1500 freestyle and to one day represent Australia in that event would be more than a dream come true."

Potts certainly has swimming in his blood - his grand-father Neil McKechnie swam for Great Britain in the 1956 Melbourne Olympic Games - finishing sixth in the 4x200m freestyle relay.

Declan Potts (Norwood, SA) 15 years

1st 400m Individual Medley: 4:35:55

1st 200m Butterfly: 2:04:95

1st 1500m Freestyle: 15:48:96

2nd 200m Freestyle: 1:54:57

2nd 400m Freestyle: 3:59:47

2nd 200m Backstroke: 2:07:14

3rd 200m Individual Medley: 2:10:92

HAMILL'S FOUR GOLD FOR QUAD PARK

Queensland 16-year-old Samantha Hamill completed her meet in fine style on the final night, claiming her fourth individual gold of the meet with a solid 200 metres butterfly swim of 2:12.78.

It capped off a brilliant five-days for Hamill who also chalked up wins in the 100 and 200m butterfly and 400 IM, with solid efforts in the 200 and 400m freestyle.

Samantha Hamill
(Quad Park, Qld) 16 years

1st 100m Butterfly: 1:00:61

1st 200m Individual Medley: 2:18:35

1st 400m Individual Medley: 4:53:13

1st 200m Butterfly: 2:12:78

2nd 400m Freestyle: 4:16:64

2nd 200m Freestyle: 2:02:95

SIMMONS SHINES WITH MEMORABLE DAY FIVE DOUBLE

And Townsville's Brad Simmons again proved to be one of the leading 14-year-old swimmers in Australia with the Gardens swimmer picking up his third and fourth gold medals on the final night, winning the 200 metres backstroke in an impressive time of 2:07.45.

It wasn't long before Simmons was back in the water with an even better swim than his previous effort as gold medal number four came in the 100 metres freestyle with an electric two lap effort of 52.95.

Brad Simmons (Gardens, Qld) 14 years

1st 50m Freestyle: 24:61

1st 100m Freestyle: 52:95

1st 100m Backstroke: 59:08

1st 200m Backstroke: 2:07:45

The Making of Men

"THE MAKING OF MEN" WILL ASSIST MALE ATHLETE GAIN THE TRAINING EDGE AND KNOWLEDGE TO BECOME THE SPORTS STARS OF TOMORROW.

Coaches, athletes and family members are encouraged to experience this unique and spectacular seminar, presented directly to male swimmers! Guest speakers will present a number of topics geared toward enhancing male athletic performance.

Life Performance Coach, Carol Fox, will identify the characteristics of champions. Champions share common qualities over and above physical fitness and skills in their chosen sport. Champions have the ability to focus and Carol will expand on how athletes can maximise their chances of success and develop the focus of champions.

Sports Psychologist, Lisa Stevens, will present the advantages of "mental preparation" for competition. Athletes will learn about their unique masculine body and what works for them!

Karen Holzer, Sports Physician, will give important insights into exercise induced asthma and its control and prevention for young athletes. Karen will also educate athletes, coaches and parents on how to prevent and manage injuries in swimming, a high repetition sport.

Eating to refuel the muscles and preparing for the next session, eating to optimise muscular growth and eating to enhance the immune system are all important aspects athletes can learn in order to achieve the best. Fuelling the body correctly is essential and Sports Dietician, Emma Wilson will run through the most appropriate ways to 'Fuel your Body.'

Australian Olympic coach, Ian Pope, will present and cover issues with regard to training, racing and how to cope with the pressure of competing at an elite level.

The inspiring story of Olympian Pat Murphy; his personal journey to achieving his goals, will round out this seminar, and is not to be missed by those who take their swimming seriously!

Come along to a very memorable, informative and enjoyable day. For further information and a booking form, please visit www.swimmingvictoria.org.au

Biggest Loser Competition

ascta QLD
Australian Swimming Coaches & Teachers Association

CONGRATULATIONS AND GOOD LUCK TO THE 26 ASCTA MEMBERS WHO HAVE TAKEN UP THE CHALLENGE OF THE 2007 BIGGEST LOSER COMPETITION.

These coaches have all agreed to the challenge of attempting to losing weight and improve their overall health through the winter months.

At the final weigh-in, at either the Australian or Queensland S/C Championships, the coach who has lost the greatest percentage of their starting weight will win half the total prize-pool with the balance to be donated to their chosen charity.

HERE'S WHO'S PLAYING!			
Matthew Brown	Qld	Andrew Hunter	NSW
Paul Bruce	SAL	Shaun Crow	Qld
Brendan Keogh	SAL	Dave Kelsheimer	Vic
Mick Palfery	Qld	Drew McGregor	Qld
Jason Cooper	Qld	Steve Smith	Qld
Craig Sweeney	Qld	Ken Sabotic	Qld
Paul Simms	Qld	Shane Kingston	Qld
Greg Morrison	NSW	Tim Taylor	Qld
Kaylee George	ascta	Rick Van Der Zant	Qld
Andrew Tuxford	Qld	John Wallace	Qld
Mark Lorrimer	Qld	Warren Knight	Qld
Ron McKeon	NSW / ascta Board	Tony Shaw	NSW / ascta Board
Jo Love	Vic	Leanne Speechley	NSW

BEST WISHES TO ALL THE PARTICIPANTS, GOOD LUCK!

Talent identification and development

PRESENTATION AT THE 2007 ascta CONVENTION

by Dr Ralph Richards

INTRODUCTION

Many great coaches are discovered once they have uncovered a talented swimmer.* Whilst the goal of every coach is to improve the performance capability of every swimmer under his/her tuition, the innate ability of each swimmer to adapt and respond to the training program will greatly influence the end results. Because coaching is a results-driven occupation there is great incentive for the coach to seek out those athletes with the greatest potential to succeed.

The concept that 'talent identification', is an effective means of increasing a coach's chances of producing elite athletes, has been investigated and tested over many years. However, the most reliable evidence remains equivocal, and no single measure or test battery has yet provided a reliable means of early identification (i.e. prior to puberty) of future elite athletes. Much of what we consider to be 'talent' is actually the degree to which each athlete possesses certain physical, physiological, or psychological attributes that may contribute to elite performance. Prediction methods that rely upon a formula or set criteria (based upon recognized performance capabilities among mature athletes), when applied to novice or beginning athletes, produce uncertain results at best. However, many coaches cling to the belief that future champions can be identified very early in their development with some degree of certainty. The strength of this belief is usually anecdotal evidence that well performed swimmers at age 8-10 will go on to become champions when they are fully mature. Certainly there are documented cases where swimmers have performed at their peak throughout junior, age-group, and senior-elite competition. However, the vast majority of long-term studies comparing the results of under-11 sports performance and Olympic success have shown no significant relationship. Although most of the reported research is not swimming specific, those studies involving swimmers do not show a strong relationship between early success and elite performance as adults (i.e. past the age of 18 years).[1] However, most historical data on Olympic swimmers clearly indicates that senior elite swimmers learned their swimming skills prior to the age of 8 years and maintained some level of involvement (i.e. not necessarily championship performance) with swimming during their pre-pubertal years.

Straightforward talent identification methods applied to young children may not be the most efficient way of nurturing future swimming champions. In Australia; as in the United State, Canada, Great Britain and other nations that support an 'athlete development pathway'; more practical methods are employed to provide progressive levels of support to young swimmers. Programs are structured to emphasize critical developmental factors that will distinguish exceptional performers. In a sense, traits that contribute to high performance swimming are revealed as an athlete matures. The great challenge for coaches is to recognise what young swimmers need at various stages of their careers and to keep as many swimmers involved and motivated to continue in our sport.

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CHARACTERISTICS OF ELITE SWIMMERS

Physical Factors

It is true that elite swimmers share many common physical characteristics. A large percentage of the variation in physical features between one individual and another may be attributed to genetic profile, and in theory this means that prediction methods can provide information on how the young athlete may look 10-20 years into the future. Because certain physical characteristics may contribute to a performance advantage, there are numerous profiling methods that have been tried as talent identification models. For example, the mature height of an individual, as well as other anatomical characteristics, can be accurately predicted during certain stages of a child's development because somatotype is significantly influenced by genetic factors. However, to focus on anthropometric variables as a sole means of identifying potential champions tends to overlook the complex set of factors that influence elite performance. Many swimmers having average physical stature have achieved remarkable results because of other performance factors, such as technical ability, physiological capability, or simply

their desire and dedication to succeed. In some respects a child's 'talent' as a future athlete may lie in their exceptional will to succeed, dedication to training, or mental toughness in race situations as much as their physical size. There are many characteristics that collectively can compensate for any shortfall in one characteristic. It's also true that many swimmers having ideal physical characteristics fail to achieve their potential because of insufficient commitment, inappropriate training progression, or missed opportunities.

Studies on elite swimmers have been used to identify common physical characteristics, as compared to their less successful peers. The general premise is that a swimmer's morphology influences the horizontal components of lift and drag and thereby affects the potential to generate optimal propulsion and to minimise resistance forces. The typical profile of an elite swimmer features these general characteristics:[2]

- greater than average height,
- wide shoulder girdle and narrow hip width (note: 'wide' and 'narrow' are relative terms, the respective ratio will determine if the relationship is favourable),
- relatively long arms in relation to one's standing height (note: arm-span is measured from the extremities of the outstretched arms),
- favourable ratio of long-bone development in the legs (note: this means that the leg-length is greater than trunk length),
- relatively large hands and feet.

There are also some variations reported in research literature specific to stroke specialty. For example, male breaststrokers tend to be slightly heavier in their body build with large feet relative to their height. Freestylers and backstrokers (both sexes) tend to be the tallest and have the longest leg length in relation to body size. However, the overall differences between elite swimmers having different stroke specialities are usually less than the differences between elite and non-elite swimmers.

Body composition also appears to be a good descriptive characteristic of elite

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swimmers. As a rule, elite swimmers tend to have lean body types. That is, the percentage of body mass that is fat tissue is relatively low when compared to age/sex peers who are not elite performers. The amount of body fat is one factor that is not entirely controlled by genetic influence. To a large extent, one's body composition can be controlled through good nutrition practices and appropriate training methods. Muscularity is another aspect of body composition where elite swimmers show common traits. Elite swimmers are usually described as 'lean muscled' rather than 'heavy muscled', as displayed in many other sports. Muscularity is a characteristic that is influenced by both genetic factors and type of training undertaken. The body shape of elite swimmers is also distinctive, typically narrow in terms of chest depth (for mature female swimmers this means relatively small breast size), but wide at the shoulder. The torso typically tapers to a narrow waist and hips, a 'V-shape' as viewed from the front. These characteristics provide optimum mechanical advantage in swimming; however, the technical success of a mature swimmer is influenced by a combination of factors.

Physiology

The physiological characteristics that are advantageous in swimming will depend upon the type of event a swimmer intends to pursue (i.e. distance or sprint). Because physiological factors are more susceptible to change as a result of the type and volume of training, talent identification methods are less direct. Any screening methods used on young children seek to select only those individuals possessing characteristics at the extremes of the physiological spectrum.

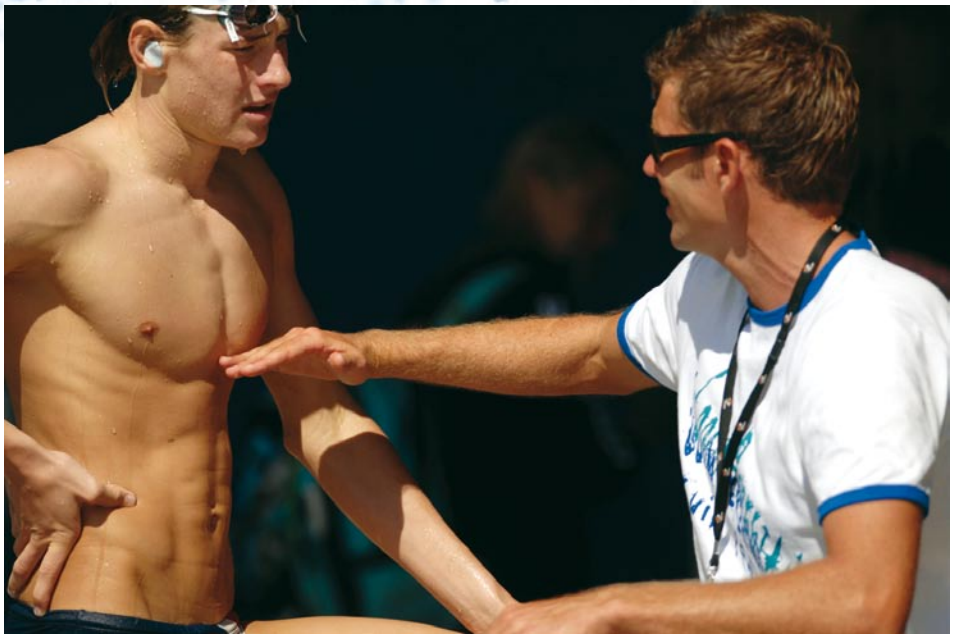
For example; 'explosive-power' and 'fast reaction time' are desirable traits for sprinters. Young children will demonstrate variation on these characteristics, but only those at the extreme of a population distribution (i.e. two standard deviations above the mean) can expect to remain above the norm after reaching maturity. Because the long-term affects of physical training during the childhood years are significant, individuals may shift their rank within the population distribution by the time adolescence finishes. Many individuals who may be only slightly above average during childhood will rank much higher once they have been exposed to a training program that develops the muscular and neuro-muscular components that are central to sprint performance.

A second example; muscular endurance is a desirable trait for elite distance swimmers. Once again, children can be tested on their endurance capabilities and ranked within a population. Both swimming and non-swimming tests (i.e. non-swimming tests are often used to factor out the relative efficiency of one's stroke technique) of muscle endurance are often used for this purpose. Once again, the long-term affects of swimming training appear to shape one's endurance capability (and therefore continued success) more than initial potential. It may be true that those children with 'natural' endurance potential are attracted to the longer distance swimming events (because they experience some initial success) and if their technique, training program, and motivation/attitude are supportive, they have a better than average chance of continued success in those events.

Experienced coaches can easily recognize that some young swimmers have a better 'feel' for the water than other swimmers. A swimmer's ability to sense pressure on the propulsive surfaces of the hands and feet provides a great advantage in terms of applying optimal stroke technique. Talented swimmers are the ones who quickly make adjustments in

[1] Paraphrased from coaching myth – no known author.
Bailey, D. "Growth and Maturation in Juniors" (review of literature), University of Queensland, 2003.

[2] Carter, J.E. and Ackland, T. (editors) **Kinanthropometry in Aquatic Sports: A Study of World Class Athletes**, Human Kinetics Publications, 1994.



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their movement patterns to maximize applied force. Since swimming relies upon tactile sense more than most sports, the quality of one's neuron-muscular control becomes a measure of talent. The talented swimmer will also possess a great sense of balance and body awareness in the water. These characteristics are very difficult to objectively quantify and therefore more subjective assessments of talent are generally used, based upon the experience and technical knowledge of the assessor (i.e. the coach).

In recent years, well-known international coach Bill Sweetenham has advocated the use of 'recovery ability' as a significant measure of physiological capability. Both sprint and endurance athletes will have a certain ability to absorb and then adapt to the physical stress of training. If repeated training activities can be performed with minimum reduction in performance, then the athlete can (in theory) complete more specific training volume. This provides the athlete with certain performance advantages, as they are able to successfully absorb a greater amount of training stress.

Technical Skill

Technical skill refers to a swimmer's ability to simulate the 'optimal' mechanical stroke model, based upon the swimmer's individual size, shape, strength and power. Coaches recognize that two mechanical factors combine to produce swimming efficiency: (1) the swimmer's ability to apply optimal force, and (2) the swimmer's ability to produce minimal resistance. Therefore, technical skill acquired during the learn-to-swim phase of a swimmer's career is critical to later success. Some of the variation in stroke technique will be the direct result of all the physical and physiological characteristics, both innate and acquired. In addition, a portion of the variation between one swimmer and another will be due to the methods applied by the swim teacher. Although there is insufficient research to substantiate the claim that future champions are given a good start through best practice teaching methods that emphasize 'mastery' of all skill components; there is considerable empirical evidence in support of this concept. Successful (i.e. producing graduates having optimal skill) learn-to-swim programs may present a useful talent identification subject pool.

Mental Toughness

Last, but by no means least, some characteristics shared by elite swimmers are associated with one's psychological make-up. Like the technical aspects of performance, these characteristics are sometimes hard to assess by traditional methods (i.e. standard tests). Research has not clearly identified if a list of specific traits are common to elite swimmers. However, there are general traits worth considering when looking for the 'talented' swimmer. Most successful swimmers have a well-balanced sense of 'self'. That is, they have a healthy self-concept and belief in their own ability. They are usually the type of person who displays great determination and concentration to stay with a task to completion.

EXAMPLES OF TALENT IDENTIFICATION WITHIN THE AUSTRALIAN SPORTING ENVIRONMENT

In Australia, several talent identification models have been developed in theory, these usually apply to sports where the acquisition of specific sporting skills takes place after puberty. Some sports, such as rowing, have been successful with a mass testing approach to identify potential elite competitors on the basis of physical features and general physiological capacities. Potential elite rowers are identified at a rather advanced stage of physical development, typically between the ages of 15-18. In swimming no large scale testing programs have been successfully conducted. Because swimming is a sport requiring highly technical movement patterns that take years to master, proper skill development must begin at a relatively early age. This means that if we're screening young children on physiological measures there will be a large degree of error introduced due to the individual's level of biological maturity.

There is also a problem when using non-specific (i.e. non-swimming) tests to identify physiological potential. Although a person may have great potential on a physiological trait, if they do not possess good technical swimming skills the chances of becoming an elite swimmer are diminished.

The work of Bill Sweetenham, David Pyne, and Bill Nelson at the Australian Institute of Sport in the late 1980's produced a swimming specific application of general performance characteristics. The problem with implementing this model was that it relied heavily on a coordinated sport infrastructure to support widespread testing. Without this, it was impossible to test widely enough to publish reliable data. It was also recognised that because swimming is a skills based activity, the underpinning influence of quality lean-to-swim systems could not be rationalised during sampling on 11-14 year-old swimmers. The implementation of a widespread talent identification program in Australia would require a very large organisational commitment, with no guarantee that returns would be better than experienced observation now provides. Also, it is one problem to identify talent and another to develop and nurture that talent to an elite performance level.

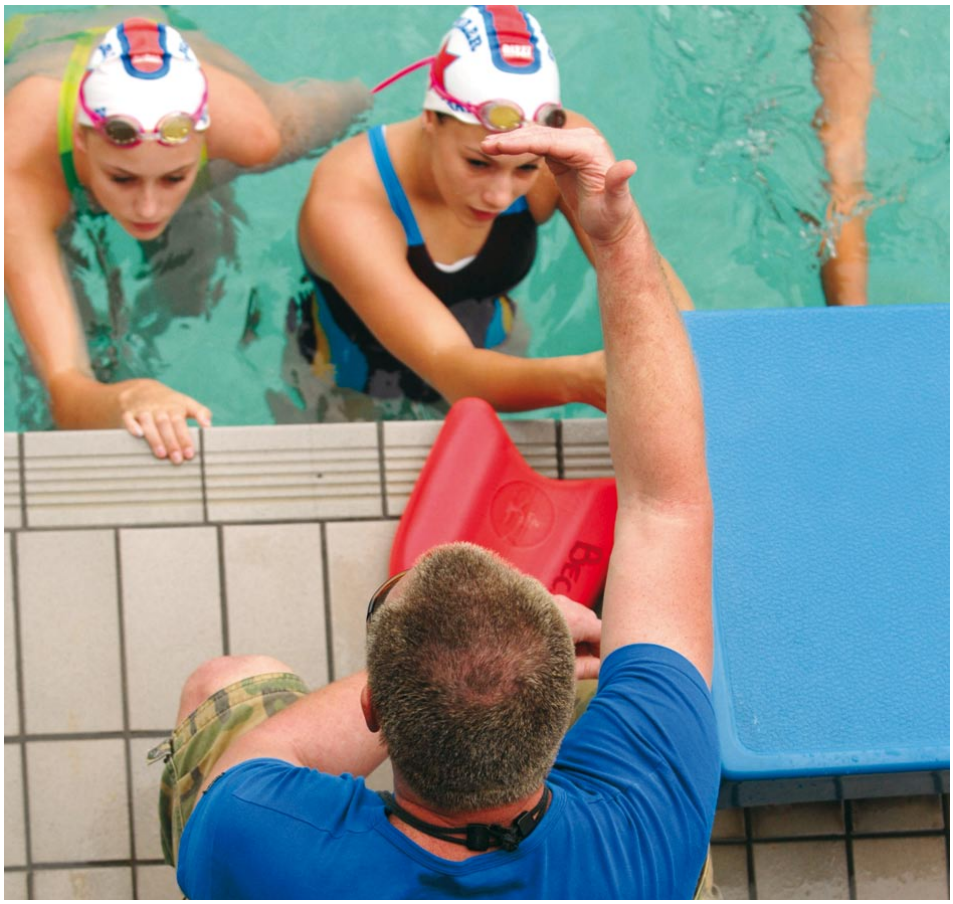
It has been said that the best form of talent identification is mass participation. The best way to identify talent is to have large numbers of young children exposed to quality learn-to-swim programs and then to keep them in the sport during the age-group years. This recognizes the fact that talented swimmers will mature at different rates and some will be 'found' as 12 or 13 year-olds and others may be 'discovered' as 14 or 15 year-olds. Much of the success attributed to any identification program will rely on the 'educated-eye' of the person conducting the test. The educated-eye must act in consort with scientific principles and a good understanding of what constitutes a stroke model. Experienced coaches who have an understanding of how a swimmer develops during their sporting lifetime will be well placed to recognize young swimmers having potential.

The value of any early identification program can be measured by the number of swimmers who are introduced to, or retained in, competitive swimming programs. Coaches may still want to conduct objective testing, but the complexity of performance variables diminishes the impact of most test protocols; particularly if tests are administered prior to puberty – and this is the main focus of 'talent identification'. Unfortunately, valid statistical data on what is a 'good' or 'average' score on various performance measures is seldom available. Ultimately, how fast a swimmer swims (in various events) determines if they are above or below the 'competitive swimming population' norm, and time alone may not quantify many of the skill components involved in racing. However, the coach may choose to use tests as a means of ranking swimmers on a certain trait or skill within a group. After accumulating a sufficient amount of data the coach will be able to quickly assess an individual swimmer's general ability and specific strengths or weaknesses. From that information the coach may address the perceived weaknesses, while providing a training program that develops a large number of performance variables.

DEVELOPING TALENT

Progression

There are numerous accounts of how young children progress from novice to elite swimmer. Three challenges face coaches in achieving maximum long-term performance through the age-group years and into senior swimming: (1) maintain the performance progression of early maturing athletes, (2) plan appropriate training for the majority of athletes maturing within the 'normal' age-range of adolescence, and (3) nurture the late maturing individuals by keeping them in the sport and maintaining their developmental progression. All models for swimmer development must recognize the principles of human growth and development and respond to individual needs. It's also important for the coach to understand what aspects of sporting development are most sensitive to change during certain stages of physical growth and maturation.



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Examples of developmental variations among swimmers are numerous. Physiological capacities, such as aerobic endurance, will develop quite rapidly during the critical period of pre-pubertal development. It's possible for some 13 or 14 year-old girls to achieve high levels of performance in a number of events, particularly distance freestyle, 400 IM, and 200m breaststroke. It is a major challenge for the coach to maintain or improve performance for the next 5-6 years, until the athlete is fully matured. While early maturing swimmers (particularly girls) may have some of the physiological capacity of an elite athlete, they are still developing the technical, tactical, and psychological skills necessary to maintain a senior elite swimming career. At the other extreme of the developmental scale, late maturing athletes have developed slowly in a physical sense, without many of the pressures or demands of elite performance. They must acquire a number of skills after maturity (i.e. strength, power, and racing ability) from a platform of years of solid training background.

It's true that every child will mature at a slightly different rate. Research on populations gives us normative information on the likely chronological age at which certain biological markers are reached. In reality, any two 12 year-old swimmers may be 1-1 _ years apart in their biological ages. This makes the coach's task of identifying performance based upon 'talent', as distinct from performance based upon 'maturity', all the more difficult. Research has also suggested that physical training itself may impact on some aspects of biological maturation.

A Balanced Age-Group Training Model

A general developmental model (that may start at age 7 or 8 years) can be applied to

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long-term swimmer development (refer to the "Australian Swimming Multi-Year Age-Group Swimmer Development Model"). This model will establish the background conditions and training experiences applicable to most swimmers when they reach the age of 14 or 15 years. Biological maturity, progressive skill development, physiological capacities, emotional and social maturity are the major considerations when guiding swimmers through their sporting progression. The age-group swimming program must target objectives that are compatible with each swimmer's readiness and ability to achieve. Therefore, age alone is not the only criterion used to assess a swimmer's progress.

Three important concepts should be incorporated into the coach's program. First, different training levels should have different emphasis in terms of training components and developmental objectives. Second, it's of paramount importance that both mastery and retention of lower level skills and fitness components are carried forward to the next training level. Swimmers must be able to maintain basic skills and fitness components, or quickly re-acquire these after any period of reduced training. Third, training programs should be progressive (i.e. advancing in a logical manner) in their application and complexity.

The effects of youth training programs on sporting achievement have been extensively studied. Various recommendations forthcoming from generic research can be directly applied to swimming. Our coaching models for skill development, physical development, and psychological development will determine how these recommendations are implemented.[3] The key points are:

Skill Development

- Good Technique = High Efficiency.
- It's important to know the difference between Technique and Style.
- Complex skills should be broken down into simplified technique.
- Skills develop from 'Learning' to 'Performance with Speed' to 'Performance with Speed while Under Pressure'.
- The current level of physical preparation impacts on skill acquisition.
- Motor development and the complexity of a skill will affect the time it takes to consolidate the permanent application of that skill.

Psychological Development

- Maintaining motivation requires developing psychological skills within the context of the swimmer's rationale for participation.
- Age-group swimmers are not 'little senior swimmers'. This has implications for the way a coach communicates with his/her athletes.
- Acknowledgement of 'success' encourages high self-esteem.
- Positive reinforcement instills a sense of success.
- The transition from age-group to senior swimming is psychological as well as physiological.
- Psychological skills will improve faster with training and practice if applied in a positive environment.
- The emotional state during adolescence may be unpredictable and can change quickly.

Physiological Development

- Success prior to the age of 12 is closely related to biological development, while success at the senior elite level is the result of many factors.
- Late or average-age maturing adolescents tend to stay in the sport longer.
- Sporting preparation that is consistent with developmental considerations will result in better long-term improvements.
- Prior to puberty the energy system that is developing most rapidly is the 'Aerobic System'.
- Aerobic endurance based training may produce long-term residual training affects.
- Energy systems must be developed concurrently with attention to recovery methods.

Nurturing Development

A swimmer's career might be characterized by three phases of training.First, there is a 'learning to swim' phase that includes the years beginning with the first swimming lessons and progressing through mini-squad training. The primary objective is to learn the skills involved in swimming by developing each of the four strokes as well as the core elements of body control, feel for the water, and stable movement patterns. There must always be some consideration regarding 'how much' training is required, but the volume requirements are always secondary to skill requirements. Normal physical growth and development during childhood will insure that performances improve from one season to the next.

Second, there is a 'learning to train' phase that swimmers go through. Typically swimmers enter this phase having mastered basic technical skills and now the demands of training take centre stage. It's important to maximize one's

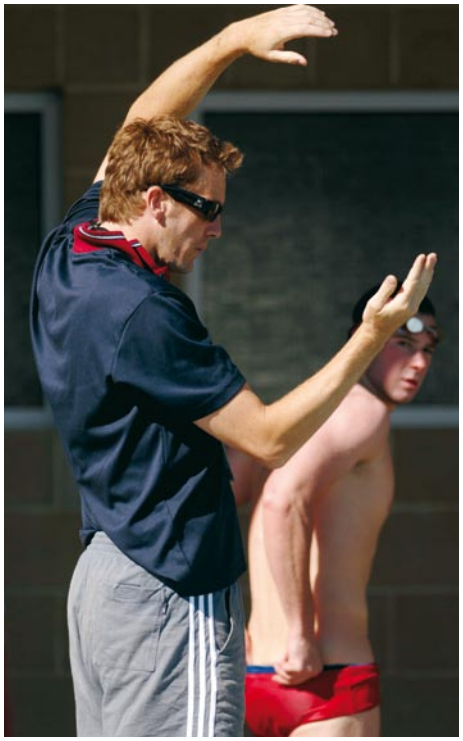
[3] "Coaching Children: Understanding the Motivational Process" in Woodman, L. (editor) **Sport Science Review: Coaching Science, vol. 2, no. 2**, 1993

potential during the rapid increase of physical capacities just prior to and during maturation. This period begins about 1-1_ years prior to puberty and extends past biological maturation to about 14-15 years for girls and 16 for boys. The start and end points are variable due to the individual differences in the timing and rate of maturation. The quality of training is expressed in terms of maintaining efficient and effective technique over progressively greater session loads, longer training cycles, and successive seasons.

The third phase, 'learning to achieve' occurs once the swimmer has mastered the first two phases. This typically represents the later stages of age-group competition and the transition into open competition. During this phase annual training volume may not increase substantially, but the complexity of training loads will increase. The proportion of high intensity training will increase, as will the diversity of training methods. This phase represents the realization of 'talent' and 'talent development' to achieve one's potential.

Applying Appropriate Training Methods

Most swimming coaches would agree that effective training requires an applied understanding of key training principles. We seek to understand how (in theory) individual principles shape the outcome of a training program. However, when training plans are actually implemented there is a net outcome from multiple training methods that may reflect both complementary and opposing theories. Training stressors may be overlapping, accumulated, sequential, or sometimes even contradictory in the way they affect adaptation. Training an athlete to achieve one's potential requires a complex mix of calculated as well as intuitive judgments about how various training principles are best applied.



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Training is the systematic application of stress to produce a change or adaptation so that, over time, similar stress is more easily accommodated. The process challenges each of the body's capacities to overcome the introduced stress in a specific way. The training load becomes significant because of its magnitude (i.e. intensity) or its volume (i.e. accumulated load over time). The combination of intensity and volume of work present an overall stress on the body and its systems. When the load reaches a point where training can just be accommodated, the concept of 'overload' is being applied. This term also implies that certain limits of exercise intensity or duration are within reach, but the body can't continue to perform at that level for an unlimited period of time. Training overloads are usually sequenced into patterns (i.e. repeated applications) so that individually the applications place a high, but achievable, demand on physical capacities. Collectively, the recurring sequence of training patterns produces the desired adaptation.

The applied stress must always be within one's ability to recover sufficiently so that the training stress is absorbed. The sequencing of stress and recovery may take place over long periods of time to produce the required change. The concept of training overload must always be applied concurrently with the principle of training adaptation; that is, stress–recovery sequencing. The timeframe required to affect change exists on several levels. On a micro-training level the rest time between successive training swims, along with the intensity and duration of that swim, will determine the swimmer's ability to continue at that level of performance. From a macro-training perspective, progressive increase in training volume and intensity over weeks, months, and years will shape long-term adaptation in a number of performance capacities.

It's obvious that training must be specific to the physical capacity we wish to overload. This is known as the principle of 'specificity' of training. In theory we would like to isolate a capacity, overload it, allow it to recover or regenerate and then stress it again until it has adapted to an optimum level of performance. However, in reality it's very difficult to isolate one capacity in this way. Even the most specific type of training must rely upon the integration of many exercise capacities that collectively affect swimming performance.

Training programs having a narrow focus, where the major emphasis is on a single or limited number of physical capacities, uses the principle of 'specificity'. Although we can never completely isolate one energy system or one performance variable, there is great benefit in targeting specific training outcomes. Once again, we can relate this principle to the micro and macro-levels of training. On a micro-training level, each training set can be constructed so that a specific capacity is overloaded. On a macro-training level, training over weeks or months can be programmed to facilitate a specific adaptation. The principle of specificity is a very powerful tool for the coach to use. However, there is a contrasting principle known as 'variation' of training effects that is also important when constructing a training program for age-group swimmers.

If one physical capacity is stressed to the exclusion of others, over time there may be a regression in those capacities receiving insufficient stimulation. This aberration of the principle of specificity is most often seen when coaches concentrate training exclusively on the extremes of the energy systems. If swimmers are given a program of only endurance training they may loose some of their natural speed and muscle power. If swimmers are given an exclusive program of short sprint work, they are less likely to improve their cardio-respiratory function. Variation in the training program allows the coach to target some capacities for major adaptations and others for maintenance. In addition, variation in program objectives allows the coach to keep the training sessions interesting and fresh. Another way of applying the principle of variation is to recognize that a single training objective can be satisfied using an infinite number of combinations or permutations of training sets. Naturally, there is value in repeating certain training sets on a regular basis, but there is also value in altering the specific content of training sets to accomplish the same objective in a slightly different way.

Burnout – The Overtraining Syndrome

The claim is often made that 'talented' swimmers are pressured to succeed and thus increase their risk of early retirement or failure to attain their potential. There are numerous terms associated with a state of poor or diminished sporting performance; burnout, staleness, chronic fatigue, overtraining, over-stress, and over-reaching are only a few. The term 'burnout' is perhaps the most global of these, indicating a general state of physical as well as mental stress that has severe consequences on a swimmer's well-being. Stress is essential if adaptation is to occur, but stress comes from many sources and has an accumulative affect. When the balance of stress-recovery is altered to an extent where adaptation fails to occur, a condition known as burnout may result. It's not simply a matter of training too much or too hard. An overtrained state is quite different to the day-to-day or short-term accumulation of fatigue that may depress an athlete's peak performance for a short period of time. Because the symptoms of overtraining are so diverse there is no single measure that by itself signals the point of no return in training stress. This is another good reason why the coach must know the individual training characteristics of each swimmer. Any two swimmers will respond differently to the same training stress. When a swimmer experiences a reduction of training performance lasting several weeks, in conjunction with general fatigue and other physiological / psychological stress markers, it's time to take action. There are three common triggers of overtraining:

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- Repeated inadequate recovery between training sessions. Remember that 'recovery' in this sense means a reduction of the training load to allow some degree of adaptation. This is not always the same as passive rest.
- Excessive amounts of high intensity training. Repeated training sessions at maximal, or high sub-maximal, training loads in volumes that may be beyond the swimmer's capability to absorb.
- Sharp increases in training loads (intensity, volume, or both).

As mentioned, all stressors interact to determine the overall level of stress. If an athlete is under psychological or emotional stress (this may come from outside the training program) there may be a noticeable affect upon swimming performance. Similarly, if there are past or present injury / illness factors, even modest training loads may be more than the individual can absorb.

Athlete Self-Concept

Once the coach knows what drives an individual, it's then a matter of applying common sense strategies to support personal motivations. Environments that keep swimmers focused and enthusiastic tend to support desirable behaviours. Research involving young athletes has identified these common motivations for participation: (1) a sense of enjoyment and accomplishment, (2) satisfaction from improving skills, fitness, and personal performance, (3) excitement generated by performance outcomes in competition. It's obvious that a swimmer's self-esteem either supports or reduces the level of satisfaction in sports participation. Can a swimmer ever have fun or enjoy the competitive swimming experience if he/she is anxious, fearful, or full of doubt? Certainly not, that's why the coach must create an environment where athletes can take risks, express themselves, and make a commitment without fear of a negative perception of 'self'. Performance anxiety is often the result of too narrow a focus on outcome (i.e. I did not win, therefore my effort is not valued), rather than a broad focus on the process (i.e. I strived to do my best, therefore my effort has value and meaning). Every swimmer must be provided the opportunity to grow as an athletes and also as an individual.

Physical Well-Being

Optimum swimming performance is achieved when all physical and mental performance factors are at their peak. It's obvious that an athlete is best able to absorb the day-to-day stress of training if a general state of physical well-being is maintained. Good nutritional practices, health maintenance, and management of injury risk will help create an environment where performance potential can be achieved. Much of the responsibility for physical well-being lies with the athlete and his or her family support network. The coach certainly has a role to play in creating the right environment.

Additional Reading

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DEVELOPING THE SWIM INDUSTRY

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PARENTS LOOKING FOR SWIM SCHOOLS

SWIM AUSTRALIA HAS THAT COVERED

To maintain its vital position a the top of the major search engines, Swim Australia has partnered with Kidspot. Rated the number one website for parents in Australia (Neilsen Netratings Market Intelligence, domestic traffic from audited sites), Kidspot had 191,872 unique browsers for the month of January (not counting international traffic). Swim Australia is not only promoted in the main category of 'Classes/Lessons' but also under 'Family Fun', 'Mum/mum to be' and 'Sport'. Additionally, Swim Australia has a feature 'Tower Ad' in Classes/Lessons.

While all this was happening, Swim Australia's other like partner – Bub Hub – developed to the stage where it now records over 150,000 unique visitors each month. "We are looking forward to growing those figures even more during 2007 with some exciting features we have planned", stated Marketing Director, Brad Lauder.

Swimming Australia, ascta and Kids Alive also link to www.swimaustralia.org.au

These links, together with the $6,000+ invested last year in optimising the site in terms of search engine performance, ensures Swim Schools registered with Swim Australia are internet leaders.

FLOOR TRAFFIC VISITORS TOO!

Assisting Swim Schools gain new customers doesn't start and stop with the internet as far as Swim Australia is concerned. Swim Australia's unique partnership with Pregnancy, Babies and Children's Expo ensures the learn-to-swim message (at Swim Schools registered with Swim Australia) is highlighted as these massive exhibitions.

Adelaide was the site of the latest, with a record of over 15,000 'decision makers' (parents or 'to be') attending. The next will be staged in Sydney from the 1st – 3rd June. In 2006, over 18,000 decision makers attended this event.

SwimLIBRARY BOOST

During 2007, Swim Australia has added the following titles to it's SwimLIBRARY section of its website:

- Developing Tour Swim Schools
- How I Grew the Nolan Swim School
- Key Ingredients to a Successful Swim School
- Marketing Strategies to Think about
- School Based Swimming
- Infant Aquatics
- Parent Education
- Fear of the Water & How to Overcome it
- Aquatic Liability Management
- Aquatics for the Young Child
- Assessment of Swimming Performance of Preschool Children
- Backyard Pool Safety
- Contemporary Trends in Infants/Preschool Aquatics
- Doing the Breath Stroke Asthma and Swimming

PUPIL TEACHER RATION FOR THE TEACHING OF SWIMMING

Swimming Babies
Teaching School Age Children
Teaching the Timid or Reluctant Child
Ten Steps to Running Your Own Swimming Lesson Business
Knowledge is Power
Baby Swim School
Developmental Motor Learning
Marketing Magic & Mess-Ups
Swim Tips for Infants
Ethnic Considerations
Developing Alternative Programs

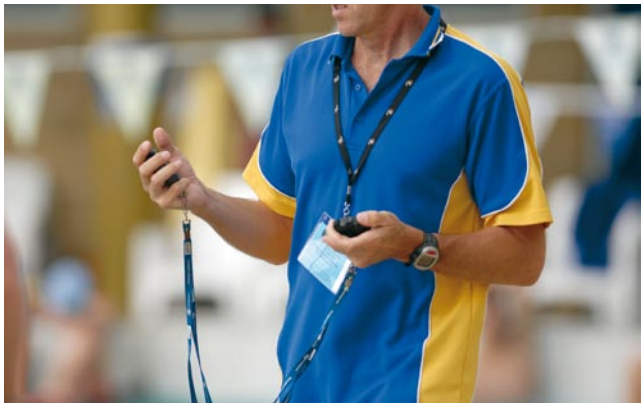
SwimLIBRARY is a 'Member's ONLY' service for Swim Schools registered with Swim Australia.

NEW swim tips

ISSUE 18 HAS JUST BEEN PUBLISHED. IT COVERS:

- The Smart Teachers Checklist (simply brilliant Barb!)
- 4 Step to Flipping Fun! (practicing somersaults)
- Feel the Stretch (developing streamlining)
- Backstroke Baddies (correction tips)
- Toddler Talk (for 12 month olds)
- Cleft Lip & Cleft Palate (swim implications)
- 8 Top Tips for Parents on Learn to Swim
- Tips for Playing Games Successfully

Congratulations to Editor Barb Nolan on completing the third year of SwimTIPS. This is easily the best regular publication on teaching swimming tips and ideas in the world. For subscription details, simply contact Swim Australia.



DEVELOPING THE SWIM INDUSTRY

ARE YOUR SWIMMERS BALANCED?

BALANCE IS THE ONE ESSENTIAL FACTOR THAT MUST BE PRESENT IN ALL SUCCESSFUL ATHLETES IN ANY SPORT YOU CAN THINK OF.

How does the champion Rugby League player or Rugby Union player seem to possess that magical side step – that explosive speed? He does it with perfect balance. He transfers his body weight forwards and backwards and from one side to the other

How does Tiger Woods hit a golf ball further and more consistently than any one else? Is he stronger? No, he is not! Tiger develops and utilises his amazing power from the hips, and then transfers the power generated by changing his point of balance at exactly the right moment into his swing, and then to the golf ball.

Why do the fastest race cars in the world, Formula One cars, have spoilers on the front of their machines? It is to keep the front end of the car pressed down on the race track so the car is balanced all the time.

How do world class ice skaters perform the amazing acrobatic feats they do on 10mm thick blades? They do it with outstanding balance, transferring their weight from one leg to the other at exactly the right moment.

Like Tiger Woods, League and Union players and our ice skaters your swimmers will swim faster in all strokes if they learn balance in the water.

Humans are not designed to swim. We are basically designed to travel and live on land so we need to understand where our point of balance actually is. When we get into the water and push off with our hands out in front to just float – it is right here, where we have to understand "balance".

The only buoyant part of our body is the chest cavity where our lungs are. From the waist down we are just "dead weight" in water, so we have to try to balance our bodies so we lie as flat as possible with the minimum amount of effort. How do we do this? We do it by having our head in the right position all the time we are swimming.

When we get into the water and push off with our hands out in front to just float- it is right here, where we have to understand balance.

Our head weighs between 12 - 15 lbs, so if we keep our head low in the water, our chest (which is buoyant and floats) is pressed down on the water like a beach ball, and this lifts our lower body closer to the surface, which is the key to "balance".

If we lift our heads just 100mm too high, then it trebles the distance our hips drop down. That would be approximately 300mm. Then we are trying to swim "up hill" instead of "down hill" If we use the weight at the other end – our head – then our body is balanced well.

As an example if the head is lifted just a little when we freestyle breathe instead of turning with the body roll then we are unbalanced.

So take the time to help your learners understand the importance of balance to help them become stronger, faster and safer swimmers.

By Ken Wood, Australian Olympic Coach, Owner-operator Swim Australia Registered Swim School

Article from SwimTIPS. For subscription details, please contact Swim Australia: 07 3376 0933 or info@swimaustralia.org.au

SUPER STROKES SEMINAR

ONE OF QUEENSLAND'S STROKE DEVELOPMENT AND CORRECTION GURUS – JAN KING - CONDUCTED AN EXTREMELY WELL-RECEIVED POOL SESSION IN BRISBANE.

Working with a group of youngsters she had never met before, Jan showed how clear instructions and logical progression make a big difference. Jan also displayed to the crowd how each drill shown has a biomechanical purpose that aids development of efficient technique.

Here's what others have had to say about Jan

"The kids in the pool demonstrating each stroke from beginning to end was invaluable – very practicable. Well done!"

Anne Bourke

"The overall Seminar was excellent – we all need to be update all the time – Jan was inspirational, what a great afternoon, Thank you"

Robyn Somers

"How can you teach 'learn to swim' if you don't understand 'WHY' we do things. Swim Australia helped me to understand more"

Raeleigh Phillips.

Here's what Jan's peers have to say about her:

"Jan King has outstanding understanding of all Stroke mechanics. Jan played an important role in developing the stroke of Australian breaststroke champion Brenton Rickard whilst he was an age group swimmer at Nudgee College. Mrs Jan King is one of the foremost leaders in teaching swimming and stroke development in Australia!"

Vince Raleigh Senior Swim Coach Australian Institute of Sport

Jan was made a Life Member of ASCTA (Qld) at last months AGM. This is what was said of her (Proposed by Shaun Crow). "Jan has been teaching and coaching in Queensland for more than 25 years. She contributed valuable technical coaching to many thousands of swimmers in these programs. Amongst her peers, Jan is regarded as one of the best developers of stroke in Australia. In addition to her coaching, Jan is a respected contributor to industry journals and professional development conferences. She has lectured at many Swimming Queensland and AUSTSWIM Teachers and Coaches workshops."

Swim Australia is working to get Jan to other venues around the country including Melbourne, Sydney and regional cities.

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WHAT'S IN A SONG?

LEARNING TO MOVE ARMS AND LEGS IN A SWIMMING PATTERN DEPENDS ON KNOWING WHERE YOUR ARMS, LEGS, AND BODY REALLY ARE.

Spatial awareness (knowing where your head, body and limbs are in space) is still developing in infants and young children so activities coupled with songs, such as the ones below make a great way for littlies to learn about their body.

Not only that, learning songs and activities helps to develop important life skills such as:

- Memory… Recalling the words to use
- Recognition…Seeing the words in their minds eye
- Sequencing…learning to put things in order, i.e. which words came first, next, last
- Rhythm…The beat high, low, fast, slow

All skills used later in life when children learn subjects such as maths and English

Singing also helps develop talking by developing the muscles in the face and the tongue

And of course it's a fun way for littlies to develop social awareness.

The next two songs can be sung to the tune of "I'm a little teapot", or simply make up your own tune.

GOLD FISH

I'm a little Gold Fish swimming in a pond
Watch me stretch my legs out nice and long
I can kick up and I can kick down
Watch me kick my legs as I swim around

PELICAN

I'm a little pelican with wings out wide
Watch my wings flap from side to side
I can dip my nose in to catch a fish
Watch my wings flap, swish, swish, swish

MAGPIE

I'm a little magpie sitting in a tree
Watch me wave my fingers, 1,2,3
I can catch worms with my beak
Now watch me as I splash my feet

BARBARA NOLAN

Article from SwimTIPS Issue 3.
For subscription details, please contact Swim Australia:
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AROUND THE POOL DECK WITH MEMBERS OF THE SWIM AUSTRALIA SWIM SCHOOL FAMILY

Name: Susie McKeon
Age: 43
Job Title: Managing Director
Organisation: McKeon Swim School

If there were five people, living or dead, I could invite to dinner, they would be … Carl Lewis, Denzel Washington, Michael Jordan, Bill Cosby, Ron McKeon - token white man

Someone who makes me laugh is Bill Cosby

My ideal holiday is spent in the sun

The best part of my job is receiving compliments on the dedication of our staff

The hardest part of my job is leaving on time in the afternoon to pick my children up

At home I cook only when I have to

My first job was fill in swim coaching for my old coach

My first car was a hand me down from Dad

My fantasy job is I'm still working towards it

If my house caught fire, the first thing I would grab is my children

Five years from now I'll be older, fitter, retired

My favourite toy as a child was mickey mouse

The last meal out I bought was a cook your own at the local Pub

My secret skill (that is now no longer a secret) is completing the suduko every evening from the SMH

You wouldn't know it, but I'm no good at singing & dancing

When I was a child, I wanted to be like my Dad

The best invention is my weekly house cleaner

My biggest regret is can't sing; can't dance

My role model is Richard Branson

I wish I had more time

Junior Swimmers Striving for Excellence

by Adam Pine

Many coaches around Australia have asked about the new "JX" phenomenon invading swimming clubs and squads. Quite simply, the Swimming Australia "JX" branded merchandise is part of a new national program to encourage junior swimmers to achieve in the pool.

The Australian Junior Excellence Program (JX) recognises, rewards and encourages junior swimmers who, through their development of aquatic skills and fitness, can achieve a high standard of swimming excellence

Swimming Australia in conjunction with the Swimming Foundation, the State and Territory swimming associations and ASCTA is proud to nationally recognise almost 10,000 JX awardees in 2007.

Under the JX program, swimmers aged from 9 to 13 years who accomplish times set by Swimming Australia qualify at Gold, Silver, Bronze or Green standard, depending on their best performance/s during the season.

This program gives 9-13 year olds times and goals to strive for and the ability to compare their performances on a national scale without leaving their district.

For achieving JX standard times, swimmers will receive special recognition by way of:

- a distinctive cap (9 & 10 year-olds) or shirt (11 to 13 year-olds)
- a certificate of achievement signed by the National Youth Coach and the captain of the Australian Swim Team!
- a motivational poster featuring elite Australian swimmers
- publication of their name on the Swimming Australia website, and
- where logistically practicable, an invitation to attend a forum specifically for Australian Junior Excellence Program qualifiers, their parents and their coaches. The forum would involve presentations by elite swimmers and coaches and other leading sports professionals.

In order to qualify for the JX program, swimmers need to achieve times set by Swimming Australia. Gold, Silver, Bronze or Green standards are awarded depending on the swimmers performance throughout the year. For recording accuracy, times must be achieved at district qualifying meets and above.

In order to encourage swimmers to diversify, an additional Gold Star Standard has been introduced for the 9-10 year olds. For example a 9-10 year old swimmer who achieves a tier one (gold standard) time for their age category in any of the specified events will be recognised in the JX Gold Standard. If they achieve this time standard in two or more events plus the 200IM they will be recognised as JX Gold Star Standard.

For the 11-13 year-olds to encourage them to diversify, they must achieve tier one (gold standard) times in more than one event to achieve JX Gold standard.

Results for the 2006-07 JX program have been compiled by the state swimming associations. Awardees have been notified through their local swimming club.

The JX program will continue into 2008 and will recognise performances from August 2007 to March 2008 at district level and above. To be involved all that is required is to meet the time standards. All awardees are automatically notified through their clubs by the state swimming association. When the 2008 qualifying times are finalised they will be sent directly to clubs and available online at www.swimming.org.au

Swimming Australia would like to thank Swimming Queensland for their work and assistance in adopting this as a national program and a big thank you to the Swimming Foundation and all state and territory swimming associations for their investment in Australia's swimming future.

2007 JX AWARDEES BY STATE

	QLD	NSW	VIC	TAS	NT	WA	SA	TOTAL
Gold	504	656	231	51	26	190	85	1743
Silver	819	802	551	73	29	245	123	2642
Bronze	677	563	421	56	31	180	85	2013
Green	958	818	722	145	63	206	114	3026
Total	2958	2839	1925	325	149	821	407	9424

GIRLS 2006-07 JX QUALIFYING TIMES

	9 Years				10 Years				11 Years				12 Years				13 Years			
	Tier 1	Tier 2	Tier 3	Tier 4	Tier 1	Tier 2	Tier 3	Tier 4	Tier 1	Tier 2	Tier 3	Tier 4	Tier 1	Tier 2	Tier 3	Tier 4	Tier 1	Tier 2	Tier 3	Tier 4
50 FS	36.00	39.00	42.00	46.00	34.00	35.00	36.00	39.00	32.50	33.50	35.00	38.00	31.50	32.50	33.00	36.00	30.00	31.00	32.00	35.00
100 FS									1:10.00	1:13.00	1:16.00	1:24.00	1:07.00	1:09.00	1:12.00	1:19.00	1:05.00	1:07.00	1:10.00	1:17.00
200 FS													2:22.00	2:25.00	2:30.00	2:45.00	2:18.00	2:21.00	2:26.00	2:41.00
400 FS													4:55.00	5:02.00	5:12.00	5:43.00	4:45.00	4:52.00	5:02.00	5:32.00
800 FS																	9:43.00	9:58.00	10:20.00	11:22.00
50 BK	43.00	46.00	50.00	55.00	40.00	42.00	45.00	49.00	39.00	41.00	42.00	46.00	38.00	40.00	41.00	45.00	36.00	38.00	40.00	44.00
100 BK									1:20.00	1:23.00	1:27.00	1:36.00	1:19.00	1:21.00	1:24.00	1:32.00	1:15.00	1:18.00	1:22.00	1:30.00
200 BK													2:42.00	2:46.00	2:52.00	3:09.00	2:35.00	2:39.00	2:46.00	3:03.00
50 BRS	48.00	52.00	55.00	1:00.00	45.00	48.00	51.00	56.00	44.00	47.00	48.00	52.00	42.00	44.00	46.00	50.00	41.00	42.00	44.00	48.00
100 BRS									1:32.00	1:36.00	1:40.00	1:50.00	1:29.00	1:32.00	1:36.00	1:46.00	1:25.00	1:28.00	1:31.00	1:40.00
200 BRS													2:57.00	3:06.00	3:16.00	3:36.00	2:53.00	2:58.00	3:05.00	3:23.00
50 BF	41.00	45.00	51.00	56.00	38.00	41.00	45.00	49.00	37.00	40.00	42.00	46.00	35.50	37.00	38.00	41.00	34.00	35.00	37.00	40.00
100 BF									1:19.00	1:23.00	1:28.00	1:37.00	1:16.00	1:20.00	1:25.00	1:33.00	1:12.00	1:15.00	1:20.00	1:28.00
200 BF													2:39.00	2:46.00	2:54.00	3:11.00	2:33.00	2:39.00	2:46.00	3:03.00
200 IM	3:25.00	3:35.00	3:45.00	4:07.00	3:05.00	3:15.00	3:25.00	3:40.00	2:47.00	2:53.00	3:00.00	3:18.00	2:42.00	2:45.00	2:50.00	3:07.00	2:36.00	2:40.00	2:45.00	3:01.00
400 IM																	5:20.00	5:38.00	5:55.00	6:30.00

BOYS 2006-07 JX QUALIFYING TIMES

	9 Years				10 Years				11 Years				12 Years				13 Years			
	Tier 1	Tier 2	Tier 3	Tier 4	Tier 1	Tier 2	Tier 3	Tier 4	Tier 1	Tier 2	Tier 3	Tier 4	Tier 1	Tier 2	Tier 3	Tier 4	Tier 1	Tier 2	Tier 3	Tier 4
50 FS	36.00	39.00	42.00	46.00	34.00	35.00	36.00	39.00	32.50	33.50	35.00	38.00	31.00	32.00	33.00	36.00	30.00	31.00	32.00	35.00
100 FS									1:10.00	1:13.00	1:16.00	1:24.00	1:06.00	1:08.00	1:12.00	1:19.00	1:02.00	1:04.00	1:08.00	1:15.00
200 FS													2:21.00	2:24.00	2:30.00	2:45.00	2:13.00	2:17.00	2:22.00	2:36.00
400 FS													4:55.00	5:02.00	5:12.00	5:43.00	4:43.00	4:50.00	5:00.00	5:30.00
1500 FS																	17:00.00	17:45.00	18:40.00	20:32.00
50 BK	43.00	46.00	50.00	55.00	40.00	42.00	45.00	49.00	38.00	41.00	42.00	46.00	37.00	39.00	41.00	45.00	35.00	38.00	40.00	44.00
100 BK									1:20.00	1:23.00	1:27.00	1:36.00	1:18.00	1:20.00	1:24.00	1:32.00	1:14.00	1:16.00	1:18.00	1:26.00
200 BK													2:41.00	2:46.00	2:52.00	3:09.00	2:26.00	2:32.00	2:40.00	2:56.00
50 BRS	48.00	52.00	55.00	1:00.00	45.00	48.00	51.00	56.00	44.00	47.00	49.00	53.00	42.00	44.00	46.00	50.00	39.00	41.00	44.00	48.00
100 BRS									1:32.00	1:36.00	1:40.00	1:50.00	1:27.00	1:31.00	1:36.00	1:46.00	1:21.00	1:24.00	1:28.00	1:37.00
200 BRS													2:58.00	3:06.00	3:16.00	3:36.00	2:51.00	2:56.00	3:00.00	3:18.00
50 BF	41.00	45.00	51.00	56.00	38.00	41.00	45.00	49.00	36.00	40.00	42.00	46.00	34.00	36.00	38.00	41.00	32.00	35.00	37.00	40.00
100 BF									1:19.00	1:23.00	1:28.00	1:37.00	1:14.00	1:19.00	1:25.00	1:33.00	1:09.00	1:12.00	1:16.00	1:24.00
200 BF													2:38.00	2:45.00	2:54.00	3:11.00	2:28.00	2:34.00	2:42.00	2:58.00
200 IM	3:25.00	3:35.00	3:45.00	4:07.00	3:05.00	3:15.00	3:25.00	3:40.00	2:47.00	2:53.00	3:00.00	3:18.00	2:38.00	2:43.00	2:50.00	3:07.00	2:33.00	2:37.00	2:42.00	2:58.00
400 IM																	5:15.00	5:26.00	5:40.00	6:14.00

How Do I Assess A Swimmer with a Disability?

by Wendy Ross

AN EASY GUIDE FOR A SWIMMING ASSESSMENT OF ANY SWIMMER WITH A DISABILITY (SWD) THAT WALKS INTO YOU'RE CENTRE.

Swim Schools play a vital role in the learning & progression of any swimmer. Starting at the learn to swim phase, then building on technique & understanding of the skill, to then moving the swimmer forward to the Squad Coach, once at an identified level within the centre has been achieved.

This similar progression is needed in the development of any SWD athlete, however constantly I am asked by swim schools, teachers & coaches on what is the best method of assessment, for a swimmer that walks into the centre with a disability. So here are guidelines that may assist swim schools & teachers on this important procedure.

ASSESSMENT GUIDELINES FOR A SWIMMER – WITH A DISABILITY.

Step 1: Introduction & Assessment Criteria.

- General information from the swimmer is needed, such as address particulars, age & phone numbers etc.This is a general theme at any swim school.
- Information is also needed on any medical issues that may affect the assessment & important medical information that may affect the teacher who is carrying out the assessment. These would include, heart condition, epilepsy & drainage fluid tube from the brain, known as a shunt, just to mention a few examples of the medical information that may be required, if applicable.
- A vital component of any SWD Swimming Assessment is observation of the swimmer. It is important for the teacher to observe the swimmer walking or pushing a wheelchair on land. This can be done whilst the swimmer walks or pushes around the pool to the teacher who is conducting the assessment. Watch the walking function, ability to access clothing whilst getting undressed to enter the pool & also observe the independence of the swimmer. Remember this will depend on age; however this is a priority to be encouraged.
- The teacher that is conducting the assessment may need to ask all sorts of questions, from the swimmer & or parent or carer. These questions could include: Water experience, questions about there disability, such as limitations & mobility, (this will vary from disability to disability) & also any other questions that may have an influence on the swimmers outcome.

Step 2. The "Water Assessment".

- This water session is where the teacher can rely on past knowledge & teaching experience, specifically in the area of the "Biomechanics of Swimming".
- The teacher looks at the body in water, body density, resistance that a swimmer faces in the water, such as frontal & propulsive forces that prevent the body moving through the water freely.
- In SWD Swimming lets understand these terms:
- **Floaters** are swimmers with a body density less than water. This includes swimmers who have a more overall fat content, swimmers with floppy & wasted limbs, such as Spina Bifida, Swimmers with paralysed limbs such as swimmers with a fracture of the spine or spinal injury & short stature swimmers who have short arms & legs. Many SWD swimmers who are floaters generally have balance issues in the early stages of learn to Swim, or until they have been taught to recover from floating back & front, swimming & or mobility positions.
- **Rollers** are swimmers who roll due to an uneven body shape & uneven body density distribution. This includes swimmers who are acquired amputees – possibly due to an accident or infection, swimmers who are paralysed on one side – Hemiplegics & also Swimmers who have missing limbs from birth.
- **Sinkers** are swimmers who have a body density greater than water. SWD sinkers are swimmers with a large content of muscle in the body & or are very bony. Cerebral Palsy swimmers fall within this group due

to uncontrolled limb movements & or muscle tension. This is a regular occurrence so therefore muscle is developed uncontrollable by the swimmer. Swimmers with brain damage following an injury, stroke or tumour.

- Assess the body in water & see if the swimmer is familiar with a water environment – so look at aspects of entry, bubbling, submerging etc. Assess buoyancy & also what mobility has the swimmer reached in there progression in the learn to swim process. Swimmers who have not been exposed to an aquatic environment will have very minimal capabilities however this will be different to swimmers who are exposed. Also does the swimmer need to be assisted in the water or is the swimmer independent. To be independent the swimmer must have mastered aspects of water safety, such as breath control & safe recovery.

Step 3. The Swimming Progression of the SWD Swimmer.

1. An important step of the assessment & for this process to be complete, is for the learn to swim teacher, conducting the assessment, to professionally give an outcome of what swimming ability can be achieved by the SWD Swimmer. It is unnecessary to give time frames as this will vary with any swimmer, whether an SWD swimmer or not.

So let's put this plan into action & use it with the examples below!

Amputee Swimmer (no other disability or medical issues that will interfere with assessment):

1. General information.
2. Medical information.
3. Other questions applicable :
   - Water familiarisation experience eg bath, pool, shower, ocean, baths etc.
   - Buoyancy & the ability to float & the exposure to floating in water.
   - Mobility & progression of movement in water.
4. Look at the body in water – Natural Roller.
5. Progression – all strokes should be obtained with modifications made.

The level of ability will depend upon the amount of body loss. Eg Arm amputee – all strokes can be learnt through the learn to swim process with adjustments made to to skills & drills in the pull area with the missing limb. A leg amputee same as arm, however modifications will need to be made in the kick practices. It is important that all limbs are used in the learn to swim process of a swimmer with an amputee. This assists in the stroke & muscle development of the swimmer, as well as balance.

SWIMMER WITH AN INTELLECTUAL DISABILITY (NO OTHER DISABILITY OR MEDICAL ISSUES THAT WILL INTERFERE WITH ASSESSMENT):

As for the amputee swimmer requirements of 1, 2 & 3 will all be covered in the initial assessment.

4. Looking at the body in water, with these swimmers the components of body density zoom into action. Just like any swimmer, whether SWD or not the components of air, water, muscle, bone & fat need to be looked at. High levels of fat & air in a swimmers body will enable the swimmer to float, however high levels of bone & muscle in the swimmers body will make the swimmer sink. All swimmers with an intellectual Disability will vary & therefore each "body" needs to be considered with the body density attributes.
5. The physical progression of swimmers with an intellectual disability is very sound. Through the learn to swim pathway, all swimmers have the ability to learn all strokes, & physically do them well. The determinant is the understanding & the length of time that tasks are learnt. It is important to note, that once skills are learnt, progression continues more smoothly in the learning process.

PARAPLEGIC SWIMMER (RESULTING FROM AN ACCIDENT):

1. General information – Swim school protocol.
2. Medical information – this may have a bearing on the assessment due to possible other medical issues.
3. Water Familiarisation, Buoyancy & mobility may become a major factor in the learn to swim process. Was the SWD swimmer an able swimmer prior to the accident? If so, the swimmer will need to be retaught all of these aspects & fundamentals of water safety & learn to swim.
4. Body in water for swimmers with paraplegia are natural floaters.
5. Progression of this swimmer will be increased the more independent the swimmer becomes in the water. Upper body all strokes can be achieved with modifications being made with each individual swimmer, taking into consideration other medical & physical issues. It is important to note that a swimmer with paraplegia confined to a wheelchair & is independent, has

variable amounts of cross training due to the swimmer pushing themselves constantly in there wheelchair.

VISION IMPAIRED SWIMMER (NO OTHER DISABILITY OR MEDICAL ISSUES THAT WILL INTERFERE WITH ASSESSMENT):

As for a swimmer with an amputee 1, 2 & 3 assessment requirements will be covered efficiently for swimmers with a visual disability, the consideration that needs to be taken into account is the importance of the swimmer to be given direction on the aquatic environment, both in & out of the water. A swimmer with a vision impairment needs to "feel" there environment.

4. Body in water – same as any able body swimmer. Body density like any swimmer is an important factor.
5. Progression in all strokes will be achieved. Variable factor will be balance, & direction of the swimmer will need to be considered. It is important to note that there are varying levels of vision impairment.

SWIMMER WITH CEREBRAL PALSY (CP):

There are several levels & variances of swimmers with Cerebral Palsy, & this needs to be taken into consideration when doing an assessment. Function ability is a vital component when conducting a swimmer assessment. Medical issues & other questions are an important part of an assessment of a swimmer with CP. A CP swimmer who is very tight & tense on land can be much more relaxed in the water. Epilepsy may be an important factor with CP swimmers as well.

4. Body in water – Sinker – It is important to watch for dragging legs in shallow water.
5. Progression of strokes achieved, will depend on range of movement, functional ability & degree of CP. Strokes can be achieved even if it is a modified stroke, according to degree of CP & the individual swimmer.

The examples listed are only a guide & to assist Swim Schools, teachers & coaches in the assessment of SWD swimmers that turn up at your door. Understand that individuals with a disability have many variances within one disability & from one disability to the next .All children should be given the opportunity to Learn to Swim, whether it is a child with a disability or not.

Let's get SWD Swimmers in your swim school.

For more information with SWD swimmers within your program contact.

Wendy Ross – Paralympic Program Development Officer

Swimming Australia – wendy.ross@swimming.org.au

Ascta articles to watch out for, in coming issues:

- Part 2 Progression from LTS to Squad SWD Swimmers.
- Part 3 Competitive Strokes for Athletes with a Disability.

YOUTH DEVELOPMENT

MATERIAL DAMAGE INSURANCE WITH REDUCED PREMIUMS AND IMPROVED COVER

MANAGING YOUR RISK EXPOSURES EFFECTIVELY IS CRITICAL TO THE SUCCESS OF YOUR ORGANISATION AND FUNDAMENTAL TO MAINTAINING A COMPETITIVE EDGE IN TODAY'S MARKET.

Safety for your patrons is paramount and the key to the long term success of your business. Marsh can help to identify, quantify and control your risks.

Marsh aims to assist organisations by designing and delivering risk management strategies that enable you to take advantage of business opportunities, while avoiding risks that could damage profits or reputation. We provide innovative, customised and effective solutions that improve corporate performance and productivity.

The new improved cover of Material Damage Insurance provides your business with competitive and reduced premiums and additional coverage that you won't find in off the shelf insurance programs .

What is Material Damage Insurance?

Material damage insurance covers physical loss or damage to your business in the events of; fire, flood, theft or where there is obvious destruction, loss or damage to buildings plant and stock.

Why take out Material Damage Insurance?

It provides insurance cover to reinstate the asset lost or damaged to the original condition. The insured may elect not to reinstate and can negotiate a financial settlement (this would reflect a depreciated reinstated value).

Material Damage Insurance is the modern formation of the fire & perils insurance, providing accidental type coverage that is flexible to extend and limit coverage as required to suit your business needs.

Material Damage Insurance may include these extensions of cover:

1. Money - includes transit, on premises business hours, outside business hours, locked in safe or strongroom and or in your residence
2. Machinery Breakdown – cover for pool pumps, water heaters, water filters and refrigerators for breakdown
3. Business Interruption – financial protection for business assets and income against events that could cause pool and business closure
4. Theft – protection against breaking and entering and property taken
5. General property – equipment taken away from your business premises that may incur accidental damage or loss or be stolen (subject to theft cover selected); this cover can be extended to cover laptops.

Why is this policy different to other business insurance products?

This policy is different because it has been designed specifically for the Swim School Operator and has a number of benefits that may not be available in other products:

- cover for contamination of pool water
- cleaning of pool due to contamination
- replacement of the contaminated pool water

Why is Material Damage Insurance important?

It's important because it:

- protects your investment and income by recouping costs incurred up to $5,000 (can be increased upon request)
- peace of mind in knowing that if an incident occurred it can be dealt with as a matter of urgency with the support of your insurance company.

This coverage is automatically included under the fire section of this policy.

WHY NOT CALL US TODAY FOR AN OBLIGATION FREE QUOTE

WE CAN ALSO OFFER YOU A COMPREHENSIVE AND COMPETITIVE LIABILITY INSURANCE QUOTE. WE HAVE RECENTLY NEGOTIATED MORE FLEXIBLE OPTIONS IN RELATION TO PUBLIC POOLS, SWIM SCHOOLS WITH A HIGH PERCENTAGE OF PUBLIC USAGE, LOWER EXCESSES AND REDUCED PREMIUM RATES.

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Age Honour Roll

MEN'S

13YRS & UNDER

50m freestyle:

P D'Agostino	(WA)	24.98
N Romeo	(NSW)	25.31
J Wright-Smith	(WA)	25.77

100m Freestyle:

P D'Agostino	(WA)	54:74
N Romeo	(NSW)	55:42
R Briggs	(WA)	55:95

200m freestyle:

N Romeo	(NSW)	2.01.32
R Briggs	(WA)	2.01.33
M Larkins	(QLD)	2.02.34

400m freestyle:

B Sabir	(NSW)	4.14.62
M Larkin	(QLD)	4.14.70
J Beard	(NSW)	4.17.48

100m backstroke:

C Rogers	(WA)	1.02.46
P D'Agostino	(WA)	1.03.10
A Venning	(VIC)	1.03.23

200m backstroke

C Rogers	(WA)	2:15.48
A Venning	(VIC)	2:16.80
M Larkin	(QLD)	2:17.59

100m Breaststroke:

C Swallow	(NSW)	1:11:90
A Palmer	(SA)	1:12:93
E Tee	(VIC)	1:12:93

200m breaststroke

E Tee	(VIC)	2.36.98
B Micallef	(NSW)	2.37.27
A Palmer	(SA)	2.40.43

100m butterfly

N Romeo	(NSW)	1:00.19
P D'agostino	(WA)	1:00.85
A Venning	(VIC)	1:00.87

200m butterfly

M Sterrenberg	(VIC)	2.14.80
B Sabir	(NSW)	2.14.94
T Russell	(QLD)	2.17.68

200m individual medley

A Venning	(VIC)	2.18.07
C Rogers	(WA)	2.19.40
M Ivosev	(VIC)	2.19.96

14YRS

50m Freestyle

B Simmons	(QLD)	24:61
J Alati	(VIC)	24:76
K To	(NSW)	24:88

100m freestyle

B Simmons	(QLD)	52.95
K To	(NSW)	54.08
J James	(QLD)	54.40

200m freestyle

J James	(QLD)	1.57.07
K To	(NSW)	1.57.44
M Evans	(NSW)	1.59.00

400m freestyle

N McKendry	(QLD)	4.09.59
L Friess	(NSW)	4.10.42
M Forno	(VIC)	4.12.70

1500m freestyle

L Friess	(NSW)	16.11.47
H Pullinger	(NSW)	16.37.58
M Larkin	(QLD)	16.56.30

100m backstroke

B Simmons	(QLD)	59.08
M Ackermann	(QLD)	59.88
M Young	(NSW)	1.00.79

200m backstroke

B Simmons	(QLD)	2.07.45
H Taylor	(QLD)	2.11.37
M Young	(NSW)	2.12.95

100m breaststroke

K To	(NSW)	1.07.38
L Kinneally	(QLD)	1.09.01
W Aitken	(NSW)	1.09.87

200m Breaststroke

K To	(NSW)	2:24:42
L Kinneally	(QLD)	2:29:78
W Aitken	(NSW)	2:31:32

100m Butterfly

M Fell	(NSW)	58:58
J Stack	(NSW)	58:79
D Powell	(QLD)	59:39

200m butterfly

L Little	(VIC)	2.10.67
A Clarke	(NSW)	2.11.98
Z Dalby	(NT)	2.13.61

200m individual medley

K To	(NSW)	2.10.85
J James	(QLD)	2.15.11
Z Dalby	(NT)	2.15.93

400m individual medley

L Little	(VIC)	4.48.99
A Clarke	(NSW)	4.50.94
N Cannell	(TAS)	4.52.60

15YRS

50m freestyle

D Smith	(QLD)	24.62
A Cois	(QLD)	24.65
J Sweeney	(QLD)	24.65

100m freestyle

D Smith	(QLD)	52.34
T Fraser-Holmes	(NSW)	53.56
H McEvoy	(QLD)	53.63

200m freestyle

D Smith	(QLD)	1.52.16
D Potts	(SA)	1.54.57
T Fraser-Holmes	(NSW)	1.55.28

400m freestyle

D Smith	(QLD)	3.57.69
D Potts	(SA)	3.59.57
T Fraser-Holmes	(NSW)	4.00.61

1500m freestyle

D Potts	(SA)	15.48.96
C Ashwood	(NSW)	15.49.38
T Fraser-Holmes	(NSW)	15.55.38

100m backstroke

T Kennedy	(VIC)	58.95
A Kelshaw	(NSW)	59.45
A Taylor	(WA)	1.00.01

200m backstroke

A Kelshaw	(NSW)	2.05.90
D Potts	(SA)	2.07.14
T Kennedy	(VIC)	2.07.82

100m breaststroke

J Meyer	(VIC)	1.06.64
N Schafer	(QLD)	1.07.64
M Crisafi	(NSW)	1.08.62
J Palmer	(SA)	1.08.62

200m breaststroke

C Halliley	(WA)	2.22.59
J Meyer	(VIC)	2.23.13
N Schafer	(QLD)	2.24.54

100m butterfly

B Treffers	(NSW)	56.94
D Smith	(QLD)	57.79
H McEvoy	(QLD)	58.16

200m Butterfly

D Potts	(SA)	2:04:95
C Ashwood	(NSW)	2:08:04
D Wyat	(NSW)	2:08:41

200m Individual Medley

D Smith	(QLD)	2:09:39
T Kennedy	(VIC)	2:10:85
D Potts	(SA)	2:10:92

400m individual medley

D Potts	(SA)	4.35.55
T Kennedy	(VIC)	4.37.70
C Ashwood	(NSW)	4.44.69

16YRS

50m freestyle

T Barrett	(QLD)	23.64
J Schnyder	(VIC)	24.03
T D'Orsogna	(WA)	24.17

100m freestyle

J Schnyder	(VIC)	52.47
T D'Orsogna	(WA)	52.54
N Johnston	(QLD)	52.59

200m freestyle

N Johnston	(QLD)	1.52.69
J Bailey	(QLD)	1.52.66
R Napoleon	(QLD)	1.53.69

400m Freestyle

R Napoleon	(QLD)	3:58:50
N Johnston	(QLD)	4:00:21
E Barry	(QLD)	4:06:09

1500m freestyle

B Collis	(QLD)	15.59.61
J Fennell	(SA)	16.05.47
C Grimsey	(QLD)	16.16.88

100m Backstroke

C Timms	(NSW)	58:65
A Bell	(QLD)	58:96
G Irvine	(QLD)	59:23

200m backstroke

A Bell	(QLD)	2.09.02
S Sheppard	(VIC)	2.09.09
G Irvine	(QLD)	2.09.38

100m breaststroke

A MacPherson	(QLD)	1.07.20
I Sarno	(NSW)	1.07.29
J Di Bella	(QLD)	1.07.30

200m breaststroke

I Sarno	(NSW)	2.24.27
J Di Bella	(QLD)	2.24.76
A MacPherson	(QLD)	2.27.32

100m butterfly

R Napoleon	(QLD)	56.12
G Irvine	(QLD)	56.28
L Staples	(NSW)	56.34

200m butterfly

A Bell	(QLD)	2.02.76
R Napoleon	(QLD)	2.03.50
L Staples	(NSW)	2.03.81

200m individual medley

T D'Orsogna	(WA)	2.08.67
K Casey	(NSW)	2.09.54
N Broadbent	(NSW)	2.09.99

400m Individual Medley

K Casey	(NSW)	4:34:75
T D'Orsogna	(WA)	4:39:51
L Curtis	(SA)	4:42:66

17/18YRS

50m freestyle

S Barrett	(QLD)	23.65
M Brooks	(QLD)	23.77
G Kubala	(QLD)	23.78

100m freestyle

R Turner	(NSW)	51.22
S Barrett	(QLD)	51.47
D Arnamnart	(NSW)	51.56

200m freestyle

R Hurley	(NSW)	1.51.94
R Turner	(NSW)	1.52.06
B Drysdale	(VIC)	1.53.15

400m Freestyle

N Donald	(NSW)	3:53:01
R Hurley	(NSW)	3:53:35
T Grimsey	(QLD)	3:57:72

1500m freestyle

T Grimsey	(QLD)	15.41.46
T Pasialis	(NSW)	15.4.64
R Schmidt	(NSW)	15.58.56

100m Backstroke

D Arnamnart	(NSW)	55:51
C McIntosh	(WA)	56:72
B Jovanovich	(WA)	56:74

200m backstroke

D Arnamnart	(NSW)	2.01.59
C McIntosh	(WA)	2.02.40
B Jovanovich	(WA)	2.04.44

100m breaststroke

J Stacey	(NSW)	1.04.26
S Ashby	(VIC)	1.04.47
S Parkes	(NSW)	1.06.24

200m breaststroke

J Stacey	(NSW)	2.20.75
J Saunders	(VIC)	2.23.94
S Abbott	(NSW)	2.26.30

100m butterfly

S Ashby	(VIC)	54.09
C Wright	(QLD)	54.81
D Arnamnart	(NSW)	55.95

200m butterfly

C Wright	(QLD)	1.59.73
N Donald	(NSW)	1.59.87
D Arnamnart	(NSW)	2.03.59

200m individual medley

S Parkes	(NSW)	2.05.16
S Ashby	(VIC)	2.06.04
A Davis	(NSW)	2.07.39

400m Individual Medley

S Parkes	(NSW)	4:26:64
A Davis	(NSW)	4:30:20
S Cross	(NSW)	4:31:13

WOMEN'S

13YRS&UNDER

50m freestyle

T Warrener	(QLD)	26.73
J Adams	(QLD)	27.44
K Schnyder	(VIC)	27.45

100m Freestyle

T Warrener	(QLD)	57:89
K Schnyder	(VIC)	59:10
J A Cyms	(QLD)	59:71

200m freestyle

J Ashwood	(NSW)	2.06.15
L Bruton	(QLD)	2.06.58
M Maselli-Sheridan	(SA)	2.08.51

400m freestyle

J Ashwood	(NSW)	4.23.95
B Wilson	(WA)	4.28.60
M Maselli-Sheridan	(SA)	2.29.93

100m backstroke

K O'Connell	(WA)	1.04.94
J White	(NSW)	1.07.11
W Ireland	(SA)	1.07.78

200m backstroke

K O'Connell	(WA)	2.21.47
J White	(NSW)	2.24.53
M Maselli-Sheridan	(SA)	2.26.15

100m breaststroke

T Wallace	(QLD)	1:13:37
M Sansby	(QLD)	1:14:19
C Mitlehner	(NSW)	1:15:57

200m breaststroke

T Wallace	(QLD)	2.37.39
M Sansby	(QLD)	2.40.51
D Ziviani	(QLD)	2.43.96

100m butterfly

A Anderson	(QLD)	1.04.28
T Warrener	(QLD)	1.04.77
Z Diamond	(NSW)	1.06.05

200m butterfly

M Maselli-Sheridan	(SA)	2.21.30
E Smith	(NSW)	2.24.14
S Toprak	(NSW)	2.25.63

200m individual medley

K O'Connell	(WA)	2.25.76
Z Diamond	(NSW)	2.26.41
W Ireland	(SA)	2.28.12

14YRS

50m Freestyle

C Campbell	(QLD)	25:52
E Seebohm	(QLD)	26:49
N Ellis	(NSW)	26:83

100m freestyle

C Campbell	(QLD)	56.18
N Ellis	(NSW)	57.62
K Pilgrim	(NSW)	57.75

200m freestyle

E Seebohm	(QLD)	2.03.27
E Fullerton	(QLD)	2.04.59
K Pilgrim	(NSW)	2.06.47

400m freestyle

E Priestly	(NSW)	4.23.40
E Fullerton	(QLD)	4.24.40
M Bell	(QLD)	4.24.46

800m Freestyle

E Fullerton	(QLD)	8:54:24
R Dielesen	(WA)	8:56:51
M Bell	(QLD)	9:00:19

100m backstroke

E Seebohm	(QLD)	1.03.36
C Sinclair	(NSW)	1.05.43
N Ellis	(NSW)	1.05.51

200m backstroke

E Seebohm	(QLD)	2.14.59
R Dielesen	(WA)	2.18.32
E Fullerton	(QLD)	2.21.41

100m breaststroke

J Legge	(NSW)	1.12.55
S Marshall	(NSW)	1.13.55
E Seebohm	(QLD)	1.14.03

200 m Breaststroke

J Legge	(NSW)	2:35:41
K Goldman	(QLD)	2:39:09
E Thorn	(SA)	2:41:04

100m Butterfly

M Mackay	(QLD)	1:02:50
E Fullerton	(QLD)	1:03:03
N Mee	(NSW)	1:03:23

200m butterfly

N Mee	(NSW)	2.18.71
E Fullerton	(QLD)	2.18.72
N Fegan	(NSW)	2.19.93

200m individual medley

E Seebohm	(QLD)	2.17.35
K Pilgrim	(NSW)	2.19.79
E Fullerton	(QLD)	2.19.98

400m individual medley

E Fullerton	(QLD)	4.54.38
K Goldman	(QLD)	4.55.34
K Pilgrim	(NSW)	4.59.55

15YRS

50m freestyle

E Zalewski	(VIC)	26.21
K Elliott	(NSW)	26.70
R Blevins	(WA)	26.72

100m freestyle

E Zalewski	(VIC)	56.99
J Neilsen	(QLD)	58.08
R Blevins	(WA)	58.24

200m freestyle

E Zalewski	(VIC)	2.02.92
J Neilsen	(QLD)	2.03.41
P Carter	(NSW)	2.06.20

400m freestyle

E Zalewski	(VIC)	4.20.44
J Neilsen	(QLD)	4.23.67
J Takefala	(QLD)	4.24.96

800m Freestyle

J Mitchell	(WA)	9:02:54
J L Austin	(QLD)	9:03:21
M Abbott	(NSW)	9:12:60

100m backstroke

G Loh	(VIC)	1.03.71
C Clarke	(SA)	1.03.86
S Burleigh	(TAS)	1.06.00

200m backstroke

C Clarke	(SA)	2.18.55
E Zalewski	(VIC)	2.20.77
G Loh	(VIC)	2.21.36

100m breaststroke

L Pickett	(QLD)	1.12.26
R Blevins	(WA)	1.12.39
R Kemp	(QLD)	1.13.57

200m breaststroke

R Blevins	(WA)	2.37.29
T Ritenberg	(SA)	2.39.22
A Osadchuk	(QLD)	2.39.67

100m butterfly

E Zalewski	(VIC)	1.00.69
J Bullen	(NSW)	1.03.08
I Caligiore	(VIC)	1.03.64

200m Butterfly

E Zalewski	(VIC)	2:14:00
G Leone	(WA)	2:16:41
K Crofts	(NSW)	2:20:81

200m Individual Medley

R Blevins	(WA)	2:19:75
A Osadchuk	(QLD)	2:21:59
C Clarke	(SA)	2:22:86

400m individual medley

A Osadchuk	(QLD)	4.58.63
K Crofts	(NSW)	5.00.87
M Ramsey	(NSW)	5.05.96

16YRS

50m freestyle

C Fletcher	(QLD)	26.22
M Dingjan	(WA)	26.51
A Evatt-Davey	(QLD)	26.69

100m freestyle

A Evatt-Davey	(QLD)	56.48
C Fletcher	(QLD)	56.65
D Wikare	(QLD)	57.32

200m freestyle

A Evatt-Davey	(QLD)	2.01.53
S Hamill	(QLD)	2.02.95
B Hocking	(NSW)	2.04.15

400m Freestyle

A Evatt-Davey	(QLD)	4:15:65
S Hamill	(QLD)	4:16:64
M L Barnes	(QLSD	4:17:24

800m freestyle

J Powell	(QLD)	8.47.38
M Barnes	(QLD)	8.53.60
B McConville	(NSW)	8.59.57

100m Backstroke

B Hocking	(NSW)	1:02:07
B Smith	(QLD)	1:05:11
A Lenarczyk	(QLD)	1:05:24

200m backstroke

B Hocking	(NSW)	2.15.23
A Lenarczyk	(QLD)	2.17.86
B Smith	(QLD)	2.18.42

100m breaststroke

E Archer	(VIC)	1.14.65
K King	(NT)	1.14.72
D Goddard	(VIC)	1.14.96

200m breaststroke

K King	(NT)	2.39.55
L Cox	(QLD)	2.40.07
E Archer	(VIC)	2.40.68

100m butterfly

S Hamill	(QLD)	1.00.61
C Fletcher	(QLD)	1.02.07
A Holz	(QLD)	1.03.07

200m butterfly

S Hamill	(QLD)	2.12.78
J Ash	(SA)	2.17.90
B Clarke	(QLD)	2.18.77

200m individual medley

S Hamill	(QLD)	2.18.35
T Papaemanouil	(SA)	2.20.00
B Evans	(WA)	2.20.94

400m individual medley

S Hamill	(QLD)	4.53.13
B Smith	(QLD)	4.55.84
B Evans	(WA)	4.55.85

17/18YRS

50m freestyle

O Halicek	(NSW)	25.90
M Nay	(QLD)	26.14
B Barratt	(QLD)	26.22

100m freestyle

B Barratt	(NSW)	55.65
M Nay	(QLD)	55.97
O Halicek	(NSW)	56.63

200m freestyle

B Barratt	(QLD)	1.59.27
S Rice	(QLD)	1.59.99
A Bainbridge	(NSW)	2.01.13

400m Freestyle

B Barratt	(QLD)	4:08:76
K Palme	(QLD)	4:11:05
L Sellwood	(QLD)	4:14:57

800m freestyle

K Palmer	(QLD)	8.37.87
L Sellwood	(QLD)	8.38.86
B Fletcher	(QLD)	8.50.66

100m backstroke

S Rice	(QLD)	1:02:09
M Nay	(QLD)	1:02:89
F Connell	(NSW)	1:03:95

200m backstroke

M Nay	(QLD)	2.13.49
A Lucas	(WA)	2.17.36
F Connell	(NSW)	2.17.95

100m breaststroke

S Marson	(NSW)	1.11.92
E Malone	(NSW)	1.12.30
K Bird	(VIC)	1.12.32

200m breaststroke

E Malone	(NSW)	2.36.15
S Marson	(NSW)	2.36.70
D Salvemini	(SA)	2.37.05

100m butterfly

S Rice	(QLD)	59.42
A Smith	(QLD)	1.00.94
K Palmer	(QLD)	1.01.65

200m butterfly

A Smith	(QLD)	2.12.43
J Staples	(SA)	2.17.66
M Barnhoorn	(VIC)	2.19.11

200m individual medley

S Rice	(QLD)	2.15.23
B Barratt	(QLD)	2.17.34
A Bainbridge	(NSW)	2.17.53

400m individual medley

S Rice	(QLD)	4.46.70
H Chipperfield	(SA)	4.56.31
R Chatterton	(SA)	5.00.78

12 Fina World Swimming Championships

MELBOURNE, AUSTRALIA

MARCH 18- APRIL 1, 2007

SWIMMING RESULTS

WR = World record
CR = Championship record

MEN'S

50m Freestyle

1.	Benjamin Wildman-Tobriner	USA	21.88
2.	Cullen Jones	USA	21.94
3.	Stefan Nystrand	SWE	21.97
4.	Bartosz Kizierowski	POL	22.00
5.	Eamon Sullivan	AUS	22.05
6.	Cesar Cielo Filho	BRA	22.12
7.	Roland Schoeman	RSA	22.16
8.	Brent Hayden	CAN	22.28

100m Freestyle

1.	Filippo Magnini	ITA	48.43
1.	Brent Hayden	CAN	48.43
3.	Eamon Sullivan	AUS	48.47
4.	Cesar Cielo Filho	BRA	48.51
5.	Jason Lezak	USA	48.52
6.	Pieter Van Den Hoogenband	NED	48.63
7.	Roland Schoeman	RSA	48.72
8.	Ryk Neethling	RSA	48.81

200m Freestyle

1.	Michael Phelps	USA	1:43.86 WR
2.	Pieter Van Den Hoogenband	NED	1:46.28
3.	Tae Hwan Park	KOR	1:46.73
4.	Kenrick Monk	AUS	1:47.12
5.	Massimiliano Rosolino	ITA	1:47.18
6.	Lin Zhang	CHN	1:47.53
7.	Paul Biedermann	GER	1:48.09
8.	Nicola Cassio	ITA	1:49.13

400m Freestyle

1.	Tae Hwan Park	KOR	3:44.30
2.	Oussama Mellouli	TUN	3:45.12
3.	Grant Hackett	AUS	3:45.43
4.	Yury Prilukov	RUS	3:45.47
5.	Peter Vanderkaay	USA	3:46.36
6.	Federico Colbertaldo	ITA	3:48.01
7.	Craig Stevens	AUS	3:48.26
8.	Sergiy Fesenko	UKR	3:48.49

800m Freestyle

1.	Oussama Mellouli	TUN	7:46.95
2.	Przemyslaw Stanczyk	POL	7:47.91
3.	Craig Stevens	AUS	7:48.67
4.	Federico Colbertaldo	ITA	7:49.98
5.	Sebastien Rouault	FRA	7:52.04
6.	Sergiy Fesenko	UKR	7:53.43
7.	Grant Hackett	AUS	7:55.39
8.	Ryan Cochrane	CAN	7:56.56

1500m Freestyle

1.	Mateusz Sawrymowicz	POL	14:45.94
2.	Yury Prilukov	RUS	14:47.29
3.	David Davies	GBR	14:51.21
4.	Larsen Jensen	USA	14:52.98
5.	Federico Colbertaldo	ITA	14:56.22
6.	Craig Stevens	AUS	14:59.11
7.	Grant Hackett	AUS	14:59.59
8.	Erik Vendt	USA	15:07.76

5km

1.	Thomas Lurz	GER	56:49.60
2.	Evgeny Rattsev	RUS	56:50.70
3.	Spyridon Ianniotis	GRE	56:56.60
4.	Jose F H Jodar	ESP	57:00.90
5.	Alex Schelvis	NED	57:01.70
6.	Igor Chervynskiy	UKR	57:06.00
7.	David Browne	AUS	57:07.30
8.	Luca Ferretti	ITA	57:09.00

10km

1.	Vladimir Dyatchin	RUS	1:55:32.52
2.	Thomas Lurz	GER	1:55:32.58
3.	Evgeny Drattsev	RUS	1:55:47.31
4.	Mohamed Zanaty	EGY	1:55:47.83
5.	Christian Hein	GER	1:55:49.43
6.	Brian Ryckeman	BEL	1:55:50.40
7.	Maarten Van Der Weijden	NED	1:55:51.91
8.	Alan Bircher	GBR	1:55:53.91

25km

1.	Yury Kudinov	RUS	5:16:45.55
2.	Marco Formentini	ITA	5:18:36.80
3.	Mohamed Zanaty	EGY	5:19:23.23
4.	Mark Warkentin	USA	5:20:42.01
5.	Josh Santacaterina	AUS	5:20:55.89
6.	Petar Stoychev	BUL	5:22:55.82
7.	Andrea Volpini	ITA	5:24:10.62
8.	Stephane Gomez	FRA	5:25:02.19

50m Backstroke

1.	Gerhard Zandberg	RSA	24.98
2.	Thomas Rupprath	GER	25.20
3.	Liam Tancock	GBR	25.23
4.	Steffen Driesen	GER	25.29
5.	Matthew Clay	GBR	25.32
6.	Aristeidis Grigoriadis	GRE	25.52
7.	Junya Koga	JPN	25.56
8.	Matt Welsh	AUS	25.61

100m Backstroke

1.	Aaron Peirsol	USA	52.98 WR
2.	Ryan Lochte	USA	53.50
3.	Liam Tancock	GBR	53.61
4.	Arkady Vyatchanin	RUS	53.69
5.	Markus Rogan	AUT	53.78
6.	Gerhard Zandberg	RSA	54.59
7.	Matt Welsh	AUS	54.65
8.	Tomomi Morita	JPN	55.04

200m Backstroke

1.	Ryan Lochte	USA	1:54.32 WR
2.	Aaron Peirsol	USA	1:54.80
3.	Markus Rogan	AUT	1:56.02
4.	Arkady Vyatchanin	RUS	1:57.14
5.	Razvan Florea	ROU	1:57.31
6.	James Goddard	GBR	1:58.88
7.	Tomomi Morita	JPN	1:59.14
8.	Gregor Tait	GBR	1:59.41

50m Breaststroke

1.	Oleg Lisogor	UKR	27.66
2.	Brendan Hansen	USA	27.69
3.	Cameron Van Der Burgh	RSA	27.88
4.	Alessandro Terrin	ITA	28.09
5.	Kosuke Kitajima	JPN	28.10
6.	Michael Malul	ISR	28.19
7.	Brenton Rickard	AUS	28.24
8.	Valeriy Dymo	UKR	28.27

100m Breaststroke

1.	Brendan Hansen	USA	59.80
2.	Kosuke Kitajima	JPN	59.96
3.	Brenton Rickard	AUS	1:00.58
4.	Valeriy Dymo	UKR	1:00.60
5.	Oleg Lisogor	UKR	1:00.83
6.	Mihail Alexandrov	BUL	1:01.17
7.	Dmitry Komornikov	RUS	1:01.24
8.	Alexander Dale Oen	NOR	1:01.67

200m Breaststroke

1.	Kosuke Kitajima	JPN	2:09.80
2.	Brenton Rickard	AUS	2:10.99
3.	Loris Facci	ITA	2:11.03
4.	Paolo Bossini	ITA	2:11.38
5.	Eric Shanteau	USA	2:11.50
6.	Daniel Gyurta	HUN	2:11.62
7.	Michael Brown	CAN	2:12.01
8.	Grigory Falko	RUS	2:12.16

50m Butterfly

1.	Roland Schoeman	RSA	23.18
2.	Ian Crocker	USA	23.47
3.	Jakob Schiott Andkjaer	DEN	23.56
4.	Albert Subirats Altes	VEN	23.57
5.	Sergiy Breus	UKR	23.61
6.	Milorad Cavic	SRB	23.70
7.	Lars Frolander	SWE	23.86
8.	Peter Mankoc	SLO	24.14

100m Butterfly

1.	Michael Phelps	USA	50.77
2.	Ian Crocker	USA	50.82
3.	Albert Subirats Altes	VEN	51.82
4.	Lyndon Ferns	RSA	52.03
5.	Andriy Serdinov	UKR	52.23
6.	Milorad Cavic	SRB	52.53
7.	Nikolay Skvortsov	RUS	52.54
8.	Jason Dunford	KEN	52.70

200m Butterfly

1.	Michael Phelps	USA	1:52.09 WR
2.	Peng Wu	CHN	1:55.13
3.	Nikolay Skvortsov	RUS	1:55.22
4.	Moss Burmester	NZL	1:55.35
5.	Ryuichi Shibata	JPN	1:55.81
6.	Pawel Korzeniowski	POL	1:55.87
7.	Ioannis Drymonakos	GRE	1:56.48
8.	Yin Chen	CHN	1:58.15

200m Individual Medley

1.	Michael Phelps	USA	1:54.98 WR
2.	Ryan Lochte	USA	1:56.19
3.	Laszlo Cseh	HUN	1:56.92
4.	Thiago Pereira	BRA	1:58.98
5.	Brian Johns	CAN	1:59.46
6.	Tamas Kerekjarto	HUN	1:59.57
7.	Vytautas Janusaitis	LTU	1:59.84
8.	Dean Kent	NZL	2:00.73

400m Individual Mevdley

1.	Michael Phelps	USA	4:06.22 WR
2.	Ryan Lochte	USA	4:09.74
3.	Luca Marin	ITA	4:09.88
4.	Oussama Mellouli	TUN	4:11.68
5.	Laszlo Cseh	HUN	4:14.76
6.	Ioannis Drymonakos	GRE	4:15.75
7.	Vasileios Demetis	GRE	4:16.83
8.	Tamas Kerekjarto	HUN	4:17.32

4x100m Freestyle relay

1.	United States	USA	3:12.72 CR
2.	Italy	ITA	3:14.04
3.	France	FRA	3:14.68
4.	South Africa	RSA	3:14.77
5.	Australia	AUS	3:15.89
6.	Sweden	SWE	3:16.09
7.	Canada	CAN	3:16.91
8.	Brazil	BRA	3:17.03

RESULTS

4x200m Freestyle relay

1. United States		7:03.24 WR
2. Australia		7:10.05
3. Canada		7:10.70
4. Great Britain		7:11.28
5. Italy		7:12.31
6. Russia		7:14.86
7. Japan		7:17.46
7. Poland		7:17.46

4x100m Medley Relay

1. Australia		3:34.93
2. Japan		3:35.16
3. Russia		3:35.51
4. South Africa		3:35.92
5. Great Britain		3:36.18
6. Italy		3:37.67
7. France		3:37.85
8. Romania		3:38.86

WOMEN's

50m Freestyle

1. Lisbeth Lenton	AUS	24.53
2. Therese Alshammar	SWE	24.62
3. Marleen Veldhuis	NED	24.70
4. Britta Steffen	GER	24.79
5. Kara Lynn Joyce	USA	24.83
6. Jodie Henry	AUS	24.96
7. Malia Metella	FRA	25.02
8. Natalie Coughlin	USA	25.31

100m Freestyle

1. Lisbeth Lenton	AUS	53.40 CR
2. Marleen Veldhuis	NED	53.70
3. Britta Steffen	GER	53.74
4. Natalie Coughlin	USA	53.87
5. Erica Morningstar	CAN	54.10
6. Jodie Henry	AUS	54.21
7. Josefin Lillhage	SWE	54.67
8. Malia Metella	FRA	54.77

200m Freestyle

1. Laure Manaudou	FRA	1:55.52 WR
2. Annika Lurz	GER	1:55.68
3. Federica Pellegrini	ITA	1:56.97
4. Katie Hoff	USA	1:57.09
5. Josefin Lillhage	SWE	1:57.90
6. Dana Vollmer	USA	1:58.30
7. Caitlin Mcclatchey	GBR	1:59.28
8. Otylia Jedrzejczak	POL	2:01.53

400m Freestyle

1. Laure Manaudou	FRA	4:02.61 CR
2. Otylia Jedrzejczak	POL	4:04.23
3. Ai Shibata	JPN	4:05.19
4. Kathryn Hoff	USA	4:05.65
5. Federica Pellegrini	ITA	4:05.79
6. Kate Ziegler	USA	4:06.99
7. Joanne Jackson	GBR	4:07.42
8. Linda Mackenzie	AUS	4:07.64

800m Freestyle

1. Kate Ziegler	USA	8:18.52 CR
2. Laure Manaudou	FRA	8:18.80
3. Hayley Peirsol	USA	8:26.41
4. Erika Villaecija Garcia	ESP	8:27.59
5. Sophie Huber	FRA	8:28.23
6. Ai Shibata	JPN	8:31.73
7. Wendy Trott	RSA	8:32.60
8. Kylie Palmer	AUS	8:34.96

1500m Freestyle

1. Kate Ziegler	USA	15:53.05 CR
2. Flavia Rigamonti	SUI	15:55.38
3. Ai Shibata	JPN	15:58.55
4. Erika Villaecija Garcia	ESP	16:05.83
5. Hayley Peirsol	USA	16:12.84
6. Lotte Friis	DEN	16:20.82
7. Kristel Kobrich Schimpl	CHI	16:27.13
8. Laure Manaudou	FRA	16:42.17

5km

1. Larisa Ilchenko	RUS	1:00:41.3
2. Ekaterina Seliverstova	RUS	1:00:43.6
3. Kate Brookes Peterson	AUS	1:00:47.6
4. Britta Kamraucorestein	GER	1:00:47.7
5. Jana Pechanova	CZE	1:00:48.1
6. Poliana Okimoto	BRA	1:00:48.7
7. Alessia Paoloni	ITA	1:00:50.1
8. Eva Berglund	SWE	1:00:50.3

10km

1. Larisa Ilchenko	RUS	2:03:57.9
2. Cassandra Patten	GBR	2:03:58.9
3. Kate Brookes Peterson	AUS	2:03:59.5
4. Angela Maurer	GER	2:04:00.7
5. Ksenia Popova	RUS	2:04:03.7
6. Britta Kamraucorestein	GER	2:04:05.8
7. Jana Pechanova	CZE	2:04:07.6
8. Poliana Okimoto	BRA	2:04:09.1

25km

1. Britta Kamrau-Corestein	GER	5:37:11.66
2. Kalyn Keller	USA	5:39:39.62
3. Ksenia Popova	RUS	5:39:51.51
4. Angela Maurer	GER	5:40:00.00
5. Natalya Panikina	RUS	5:40:01.87
6. Jana Pechanova	CZE	5:47:23.28
7. Shelley Clark	AUS	5:47:24.88
8. Laura La Piana	ITA	6:07:21.71

50m Backstroke

1. Leila Vaziri	USA	28.16 WR
2. Aliaksandra Herasimenia	BLR	28.46
3. Tayliah Zimmer	AUS	28.50
4. Jing Zhao	CHN	28.54
5. Reiko Nakamura	JPN	28.64
6. Chang Gao	CHN	28.70
7. Mai Nakamura	JPN	28.86
8. Janine Pietsch	GER	28.87

100m backstroke

1. Natalie Coughlin	USA	59.44 WR
2. Laure Manaudou	FRA	59.87
3. Reiko Nakamura	JPN	1:00.40
4. Emily Seebohm	AUS	1:00.52
5. Hanae Ito	JPN	1:00.63
6. Iryna Amshennikova	UKR	1:00.79
7. Anastasia Zueva	RUS	1:01.38
8. Tayliah Zimmer	AUS	1:02.68

200m Backstroke

1. Margaret Hoelzer	USA	2:07.16 CR
2. Kirsty Coventry	ZIM	2:07.54
3. Reiko Nakamura	JPN	2:08.54
4. Esther Baron	FRA	2:09.59
5. Hanae Ito	JPN	2:10.57
6. Nikolett Szepesi	HUN	2:10.66
7. Elizabeth Simmonds	GBR	2:11.09
8. Alessia Filippi	ITA	2:11.41

50m Breaststroke

1. Jessica Hardy	USA	30.63
2. Leisel Jones	AUS	30.70
3. Tara Kirk	USA	31.05
4. Tarnee White	AUS	31.14
5. Janne Schafer	GER	31.35
6. Zoe Baker	NZL	31.79
7. Kate Haywood	GBR	31.82
8. Rebecca Ejdervik	SWE	31.86

100m Breaststroke

1. Leisel Jones	AUS	1:05.72 CR
2. Tara Kirk	USA	1:06.34
3. Anna Khlistunova	UKR	1:07.27
4. Jessica Hardy	USA	1:07.38
5. Kirsty Balfour	GBR	1:08.05
6. Tarnee White	AUS	1:08.55
7. Kate Haywood	GBR	1:08.72
8. Elena Bogomazova	RUS	1:08.96

200m Breaststroke

1. Leisel Jones	AUS	2:21.84
2. Kirsty Balfour	GBR	2:25.94
2. Megan Jendrick	USA	2:25.94
4. Suzaan Van Biljon	RSA	2:26.19
5. Nan Luo	CHN	2:27.55
6. Birte Steven	GER	2:28.13
7. Sandra Jacobson	SWE	2:28.25
8. Tara Kirk	USA	2:28.67

50m Butterfly

1. Therese Alshammar	SWE	25.91
2. Danni Miatke	AUS	26.05
3. Inge Dekker	NED	26.11
4. Anna-Karin Kammerling	SWE	26.32
5. Rachel Komisarz	USA	26.41
6. Fabienne Nadarajah	AUT	26.77
7. Li Tao	SIN	26.80
8. Yafei Zhou	CHN	27.06

100m Butterfly

1. Lisbeth Lenton	AUS	57.15 CR
2. Jessicah Schipper	AUS	57.24
3. Natalie Coughlin	USA	57.34
4. Inge Dekker	NED	58.30
5. Rachel Komisarz	USA	58.34
6. Alena Popchanka	FRA	58.73
7. Yafei Zhou	CHN	58.76
8. Yanwei Xu	CHN	59.22

200m Butterfly

1. Jessicah Schipper	AUS	2:06.39
2. Kimberly Vandenberg	USA	2:06.71
3. Otylia Jedrzejczak	POL	2:06.90
4. Liuyang Jiao	CHN	2:07.22
5. Audrey Lacroix	CAN	2:07.73
6. Yuko Nakanishi	JPN	2:09.43
7. Sara Isakovic	SLO	2:09.66
8. Aurore Mongel	FRA	2:13.61

200m Individual Medley

1. Kathryn Hoff	USA	2:10.13 CR
2. Kirsty Coventry	ZIM	2:10.76
3. Stephanie Rice	AUS	2:11.42
4. Whitney Myers	USA	2:13.73
5. Julie Hjorth-Hansen	DEN	2:14.05
6. Shayne Reese	AUS	2:14.89
7. Georgina Bardach	ARG	2:15.26
8. Julia Wilkinson	CAN	2:15.28

400m Individual Medley

1. Katie Hoff	USA	4:32.89
2. Yana Martynova	RUS	4:40.14
3. Stephanie Rice	AUS	4:41.19
4. Jennifer Reilly	AUS	4:41.53
5. Ariana Kukors	USA	4:41.87
6. Rui Yu	CHN	4:44.49
7. Georgina Bardach	ARG	4:45.61
8. Julie Hjorth-Hansen	DEN	4:46.97

4x100m Medley Relay

1. Australia		3:55.74 WR
2. United States		3:58.31
3. China		4:01.97
4. Great Britain		4:02.18
5. Russia		4:03.32
6. Japan		4:03.33
7. Germany		4:03.34
8. Sweden		4:06.16

4x200m Freestyle Relay

1. United States		7:50.09 WR
2. Germany		7:53.82
3. France		7:55.96
4. Australia		7:56.42
5. Great Britain		7:57.02
6. Japan		7:58.04
7. Sweden		8:02.34
8. Netherlands		8:04.81

4x100m Freestyle Relay

1. Australia	AUS	3:35.48 CR
2. United States	USA	3:35.68
3. Netherlands	NED	3:36.81
4. Germany	GER	3:36.94
5. Sweden	SWE	3:39.23
6. France	FRA	3:40.09
7. China	CHN	3:40.48
8. Great Britain	GBR	3:40.94

Event Calendar 2007

ascta
Australian Swimming Coaches & Teachers Association

July 2007

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
30	31					Trans Tasman Tour Bris, Gosford, Syd 1
Trans Tasman Tour Bris, Gosford, Syd 2	Trans Tasman Tour Bris, Gosford, Syd 3	Trans Tasman Tour Bris, Gosford, Syd 4	Trans Tasman Tour Bris, Gosford, Syd 5	Trans Tasman Tour Bris, Gosford, Syd 6	Trans Tasman Tour Bris, Gosford, Syd 7 Green Licence Gladstone, Qld	Green Licence Gladstone, Qld 8
Can-Am Disability Championships - Canada 9	Can-Am Disability Championships - Canada 10	Can-Am Disability Championships - Canada 11	Can-Am Disability Championships - Canada 12	Can-Am Disability Championships - Canada 13	Can-Am Disability Championships - Canada 14 Green Licence Chinchilla, Qld	Can-Am Disability Championships - Canada 15
Can-Am Disability Championships - Canada 16	17	18	19	Telstra Grand Prix 2 Canberra, ACT 20	Telstra Grand Prix 2 Canberra, ACT 21	Telstra Grand Prix 2 Canberra, ACT 22
23	24	25	26	27	Green Licence Dubbo, NSW 28 Green Licence Burwood, NSW	Green Licence Burwood, NSW 29

August 2007

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
		1	2	3	Green Licence Gladstone, Qld 4	Green Licence Gladstone, Qld 5
6	World University Games Bangkok, Thailand 7	World University Games Bangkok, Thailand 8	World University Games Bangkok, Thailand 9	World University Games Bangkok, Thailand 10	World University Games Bangkok, Thailand 11	World University Games Bangkok, Thailand 12
World University Games Bangkok, Thailand 13	World University Games Bangkok, Thailand 14	World University Games Bangkok, Thailand 15	World University Games Bangkok, Thailand 16	World University Games Bangkok, Thailand 17	Green Licence Chandler, Brisbane, Qld 18	Green Licence Dubbo, NSW 19 Green Licence Burwood, NSW
Green Licence Burwood, NSW 20	World Swimming Grand Prix Chiba , Japan 21	World Swimming Grand Prix Chiba , Japan 22	World Swimming Grand Prix Chiba , Japan 23	World Swimming Grand Prix Chiba , Japan 24	25	26
27	28	Open Australian Short Course Championships 29	Open Australian Short Course Championships 30	Open Australian Short Course Championships 31		

September 2007

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
					Open Australian Short Course Championships 1 Green Licence Caboolture, Qld	Open Australian Short Course Championships 2
3	ASCA Coaches Clinic, San Diego, Ca, USA 4	ASCA Coaches Clinic, San Diego, Ca, USA 5	ASCA Coaches Clinic, San Diego, Ca, USA 6	ASCA Coaches Clinic, San Diego, Ca, USA 7	ASCA Coaches Clinic, San Diego, Ca, USA 8	ASCA Coaches Clinic, San Diego, Ca, USA 9
10	11	12	13	14	Green Licence Course Rockhampton, QLD 15	Green Licence Course Rockhampton, QLD 16 Green Licence Dubbo, NSW
17	18	19	20	21	Bronze Licence Course Milton, QLD 22	Bronze Licence Course Milton, QLD 23
24	25	26	27	28	Green Licence Burwood, NSW 29	Green Licence Burwood, NSW 30

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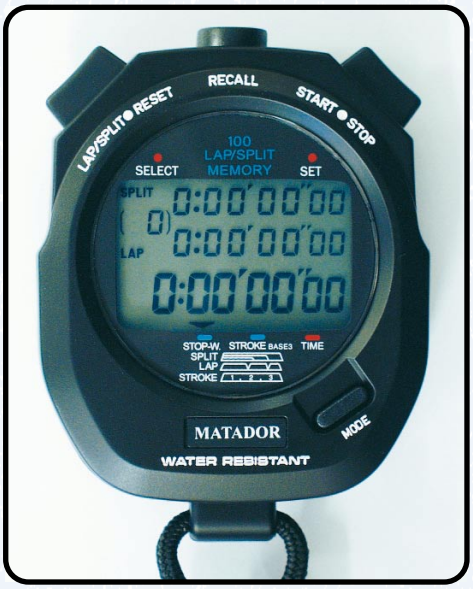

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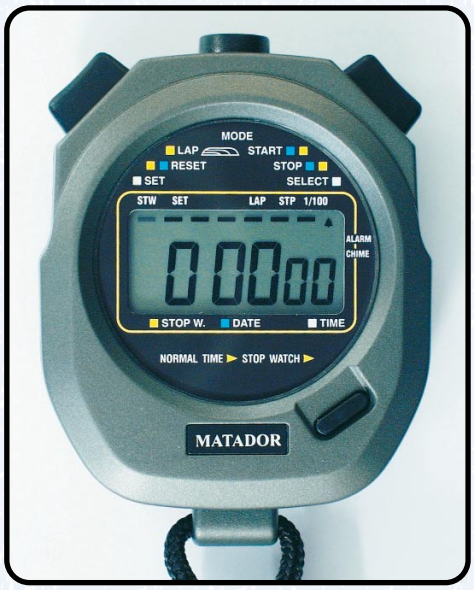

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