



# Planning

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(Incl General Masters Swimming Information)

# **Masters Swimming Australia Overview**

## **Introduction**

Masters Swimming Australia is the national sports organisation/governing body for Masters Swimming, which is a not-for-profit organisation for adult swimmers aged 18 and above. Coaching adult swimmers is in many ways identical to coaching adolescent or age-group swimmers, but you will need to keep in mind some specific points when planning a Masters program. This section discusses these points and offers some possible solutions to situations you may encounter.

## **Who is Masters Swimming Australia?**

It is a non-government, not for profit organisation, constituted in 1975. Masters Swimming Australia Inc. used to be referred to as "AUSSI", which is an acronym for "Australian Union of Senior Swimmers International". This acronym was dropped from the name in October 2009. The organisation does not receive funding from any government source; however, some Branches are eligible for and receive funding from State Governments.

## ***Our Mission Statement***

To provide at club, branch, and national level an environment that encourages all adults, regardless of ability, to swim regularly, to compete to promote fitness and improve their general wellbeing.

## ***Our vision***

Enrich and Inspire Adults to Swim for Life

## ***Our motto***

FITNESS, FRIENDSHIP and FUN

## **What does Masters Swimming Australia offer?**

Masters Swimming Australia caters for those who can only just swim through to the experienced swimmer, emphasising participation in a fun and friendly environment which encourages and facilitates adult involvement in swimming. Only 30% of members compete in swim meets, so you don't have to be a champion swimmer to join!

## **Who can join?**

Membership is open to all people who have turned 18 or are older in the calendar year of joining.

## **Masters Swimming Australia National Office**

Level 2, 50-56 York Street,  
South Melbourne VIC 3205  
Email: [admin@mastersswimming.org.au](mailto:admin@mastersswimming.org.au)

## **Goal setting**

Goal setting is perhaps the most researched and arguably the most widely used sport psychology technique used to enhance athletic performance today (Winter 1995). While goal setting is often thought of as a 'motivational tool', it can be successfully applied by coaches and swimmers to enhance concentration, self-confidence and the efficient management of time and other resources (Winter 1995). To help you understand the subject, we first define goal setting and outline its benefits before explaining the types of goals, both process and outcome, and short term and long term. We use the acronym, 'SMART', as an aid to creating effective goals.

### **Definition of goal setting**

A goal is defined as 'attaining a specific standard of proficiency on a task, usually within a specific time limit' (Locke, Shaw, Saari & Latham 1981, p.145). Practically, goals focus on achieving a particular standard within a particular period of time.

### **Benefits of goal setting**

The most important result generated from an extensive body of research is that goal setting clearly and consistently facilitates athletic performance.

Locke and his colleagues (1981) proposed that goals influence performance in four ways:

- goals give a focus that allows swimmers to direct attention and actions to important aspects of the task
- goals help to mobilise effort
- goals help to prolong effort and persistence
- swimmers often develop and use new strategies through the goal setting process

### **Process versus outcome goals**

Burton's cognitive theory (1983), focuses on how an athlete's goals are linked to their levels of anxiety, motivation and confidence. If the sole focus of a swimmer's goals revolves around winning, then any subsequent loss may result in disappointment and a detrimental impact on confidence and motivation.

*Process goals* – focus on improvement in the process of performance. These goals are not determined by the arbitrary nature of winning or losing (Hogg 1995).

*Outcome goals* – are related to success or failure in terms of the final result (Hogg 1995).

Because winning is not an outcome that is fully controllable, it is important to find a balance between outcome and process goals.

### **Short term goals and long-term goals**

*Long term goals* – are long-range objectives, such as achieving a Brach Top 10 time or breaking a particular Masters Swimming Australia National Age Group record. These are likely to occur at a point in time well removed from the present because significant improvement is likely to be needed as a precondition to achievement.

*Short term goals* – are more immediate than longer-term goals and can be thought of as subgoals that allow the swimmer to focus on the progression of skills needed to achieve long-term goals. It is important to set more immediate short-range goals to help ensure that longer term objectives are met (Gould 1998).

### **SMART goals**

Based on previous research, the acronym SMART is now widely used as a guide for effective goal setting. SMART goals are specific, measurable, achievable, realistic, and time phased.

*Specific* – goals are more effective when they are specific, tangible, direct, and clear. Setting a specific goal provides a clear focus towards which to direct time and effort. Rather than saying 'I will be a better swimmer', which is general, a more specific goal would be 'I will improve my 100m freestyle time'.

*Measurable* – goals that are measurable are more effective in enhancing performance because it is possible to objectively gauge progress and determine successful attainment of the goal. Goals should be written or described in behavioral or observable terms.

*Achievable* – goals should be difficult and challenging but achievable. Importantly, goals should be regularly monitored so as to assess the swimmer's progress in achieving them and to allow for changing circumstances. For example, if the adult swimmer's work commitments or physical limitations restrict the volume of training from one season to the next (say from four sessions a week to two), it is vital to adapt the swimmer's goals to take this into account.

*Realistic* – goals should be realistic when considering not only current skill or performance levels, but also available time, coaching and other resources, and existing commitments and motivation. Coaches also have a role to play in ensuring that swimmers set realistic goals that take into account the impact of physiological declines as a result of age. It is likely to be necessary for the coach to help the swimmer focus more on comparing age based PBs or yearly PBs than on best ever past performances.

*Time-phased* – goals are likely to be more effective in motivating and focusing efforts if specific dates for achieving a goal are listed.

Although goals can be highly motivating when regularly reassessed and changed as necessary, they can also have a de-motivating effect if a swimmer is consistently unable to achieve their goals. For example, if a swimmer sets goals that are consistently unrealistic, such as breaking Masters Swimming Australia National Age Group records, when other commitments or injury have prevented the required training, the coach can play a role in regularly monitoring progress towards these goals and adapt as necessary to increase the likelihood of successful goal achievement.

### **Planning the program**

A successful training program is one that can both *attract* swimmers in the first instance, and *retain* them over long periods. A coach's success is largely judged by whether individuals' needs are being met and this in turn depends on how much time and effort a coach is willing to

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spend on the planning process. To plan with greatest effectiveness a coach needs to understand the nature of the swimmers in his care and their motivation for being there.

Generally, coaching adults is similar to coaching age-group swimmers. Age-group swimmers, like adults, focus on gaining fitness, improving technique, learning new skills and having fun. Although there are many ways to measure improvement, swimming times are most commonly used; hence competition and performance based on times is the logical extension of a planned program. Age-group swimmers usually train to race. Racing further motivates the swimmer to train harder.

Adult swimmers, however, often have reasons for participating that have nothing to do with swimming times or performance. Irrespective of their reasons, most adult swimmers will benefit from skill, technique and fitness improvements. With technology and techniques changing over the years, even the most knowledgeable, elite, mature aged swimmer can learn new skills, or update old ones.

Another major difference is the number of sessions an adult swimmer can devote to training. With the increasing emphasis on work/life balance, most busy adults will average between two and four sessions per week. The conundrum for the coach lies with those swimmers who are unable to devote as much training time as their age- group counterparts, yet are still focused on achieving performance goals. A mid-20 to early-30 year old athlete may continue to improve on lower volumes if they:

- lack a swimming background
- are unfit
- are lacking in stroke or skill development
- are coming off a heavy aerobic base, in which case a switch to a low volume, high intensity programme can be beneficial

Ultimately, decline in performance is an inevitable aspect of the aging swimmer (see Unit 3: Training the Adult Swimmer) and the coach may need to counsel swimmers on whether their expectations are realistic regarding the amount of training they can manage (see the previous section on Goal Setting).

The fitness swimmer who simply wishes to gain or maintain fitness can easily fit into a highly planned and structured competitive program, however the opposite does not hold true. A competitive swimmer with performance goals will not get their specific training needs met in a generalist program that is purely fitness based. Unless a coach of adults has no swimmers racing, the coach should plan a **periodised** program based around the competitive season, with modifications to cater for the needs of the other swimmers along the way. The more the program can be individualised to suit specific needs, the greater the success of the training program and ultimately, the coach.

In his article 'Principles of training adaption and recovery part 2' (*ASCTA Journal* May–June 1999, p.17), David Pyne states:

*Periodisation* can be defined in simple terms as the division of the annual training plan into smaller and more manageable phases of training. Periodisation applies equally to all the different aspects of fitness such as endurance, speed, strength, flexibility and power. In its

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simplest form a periodised training program will divide the seasons into the *mesocycles* of pre season, in-season and off season. Within each of the phases, the training can be further divided into *macrocycles* of two to four weeks in duration: giving rise to such terms as general preparation, quality, taper, competition and recovery.

Planning then begins with the:

- annual plan
- macrocycles or phases
- weekly plan

### **Annual plan**

The annual plan is simply an overview of the year outlining important dates that will impact the program, such as competition dates, holidays and testing. It will be based around minor and major competitions, usually with two (but sometimes more) peaks per year for the most important competitions. It includes a rough guide to both **mesocycles** and **macrocycles** showing how many weeks each will last. At times the coach may need to plan two or even three concurrent but separate annual plans to cater for individual needs. For instance, a swimmer whose primary goal is an open water distance swim may have a very different competition schedule to a swimmer who is focused on competing at sprint events at National Championships. The mesocycles and macrocycles of both groups may or may not overlap. Look at Table 1 on the next few pages, to see the features of an annual plan. A key at the end of Table 1 explains the abbreviations for you.

### **Macrocycles or Phases**

The next phase of planning details the **macrocycles** or **phases**. Phases may confusingly be called by different names in different countries, but in Australia are usually termed Endurance, Quality, Race Preparation and Taper. Each phase may last anywhere between two and 12 weeks depending on the length of the season. Each larger training phase may have a number of smaller two to four week cycles that are repeated, usually building up the training load in volume, intensity or duration from one week to the next throughout the cycle, and over successive cycles. Each cycle is followed by a period of reduced work to allow the swimmer to recover sufficiently in preparation for the next buildup. Planning for each phase generally involves tabling each week and including the number of training sessions per week; the volume (which typically rises and falls from week to week); the major and minor objectives specific to each week and any test sets (see Table 2 in this section).

### **Weekly plan**

The **weekly plan** generally shows more detail, including days divided into both early morning and evening sessions if appropriate. Major and minor sets that will achieve the objectives stated in the macrocycle plan are shown as well as recovery sessions or days. The majority of masters swimmers train between two and four sessions per week, with some training more, and others on a less frequent basis.

The above three aspects of planning are usually drafted at the beginning of the year or season, but may be modified along the way. Individual **training sessions** are the most detailed of all and are usually drafted at the start of each week.

**Table 1: Annual Plan**

Date	Weeks to Major Comp (SC/	Emphasis			Comments & Competitions
		State Champs	National Champs	Open Water/ Distance	
<b>September</b>					
18 <sup>th</sup>	30	L Pre Season	L Pre Season	L Pre Season	Begin outdoor 50m pool
25 <sup>th</sup>	29	L Pre Season	L Pre Season	L Pre Season	
<b>October</b>					
2 <sup>nd</sup>	28	M Pre Season	M Pre Season	M Pre Season	7 <sup>th</sup> Hoppers Crossing Interclub
9 <sup>th</sup>	27	M Pre	M Pre Season	M Pre	14 <sup>th</sup> State Relay Meet
16 <sup>th</sup>	26	H Pre	H Pre Season	H Pre	
23 <sup>rd</sup>	25	L Gen End	L Gen End	L Gen End	
30 <sup>th</sup>	24	M Gen End	M Gen End	M Gen End	
<b>November</b>					
6 <sup>th</sup>	23	H Gen End	H Gen End	H Gen End	
13 <sup>th</sup>	22	L Spec End	L Spec End	H Gen End	
20 <sup>th</sup>	21	M Spec End	M Spec End	H Gen End	
27 <sup>th</sup>	20	H Spec End	H Spec End	H Gen End	
<b>December</b>					
4 <sup>th</sup>	19	M Recovery	M Recovery	M Recovery	
11 <sup>th</sup>	18	L Spec End	L Spec End	L Spec End	16 <sup>th</sup> Brighton Baths OW
18 <sup>th</sup>	17	M Spec End	M Spec End	M Spec End	
25 <sup>th</sup>	16	H Spec End	H Spec End	H Spec End	26 <sup>th</sup> Pt Leo OW / 30 <sup>th</sup> Pt Lonsdale OW Short training week due to public holidays
<b>January</b>					
1 <sup>st</sup>	15	M Recovery	M Recovery	M Recovery	6 <sup>th</sup> Lorne OW
8 <sup>th</sup>	14	L Spec End	L Spec End	L Spec End	13 <sup>th</sup> Torquay OW / 14 <sup>th</sup> Sorrento OW
15 <sup>th</sup>	13	M Spec End	M Spec End	M Spec End	20 <sup>th</sup> Portsea OW / Anglesea OW
22 <sup>nd</sup>	12	H Spec End	H Spec End	H Spec End	26 <sup>th</sup> Mt Martha OW / 27 <sup>th</sup> Queenscliff OW
29 <sup>th</sup>	11	M Recovery	M Recovery	M Recovery	Feb 3 <sup>rd</sup> Dromana OW. Aust Day w/e
<b>February</b>					
5 <sup>th</sup>	10	L Quality	L Quality	L Spec End	
12 <sup>th</sup>	9	M Quality	M Quality	M Spec End	17 <sup>th</sup> Phillip Island OW
19 <sup>th</sup>	8	M Recovery	M Recovery	M Recovery	23 <sup>rd</sup> Aspendale OW /
26 <sup>th</sup>	7	H Spec End	H Spec End	H Spec End	
<b>March</b>					
5 <sup>th</sup>	6	L Quality	L Quality	L Quality	
12 <sup>th</sup>	5	M Quality	M Quality	M Quality	12 <sup>th</sup> St Kilda Peter Mac OW. Labour Day w/e
19 <sup>th</sup>	4	H Quality	H Quality	H Quality	
26 <sup>th</sup>	3	M Recovery	M Recovery	M Recovery	

Date	Weeks to Major Comp (SC/ NC/ OW)	Emphasis			Comments & Competitions
		State Champs	National Champs	Open Water/ Distance	
April					
2 <sup>nd</sup>	2	H Quality	M Quality	M Quality	
9 <sup>th</sup>	1	M Taper	H Quality	H Quality	Easter w/e
16 <sup>th</sup>	0 0	L Taper	L Taper	L Taper	<b>22<sup>nd</sup> State LC Champs</b>
23 <sup>rd</sup>	8 1	L Recovery	H Maintenance	L Gen End	
30 <sup>th</sup>	7 0	M Pre Season	L Taper	M Gen End	<b>May 4th-7<sup>th</sup> MSA Nationals</b>
May					
7 <sup>th</sup>	6 0	H Gen End	L Recovery	H Gen End	Begin indoor 25m pool
14 <sup>th</sup>	5 11 4	L Spec End	L Spec End	L Spec End	
21 <sup>st</sup>	4 10 3	M Spec End	M Spec End	M Spec End	
28 <sup>th</sup>	3 9 2	H Spec End	H Spec End	H Spec End	
June					
4 <sup>th</sup>	2 8 1	M Recovery	M Recovery	M Recovery	
11 <sup>th</sup>	1 7 0	M Maintenance	M Maintenance	M Maintenance	<b>17th State SC Long Distance Day 1</b>
18 <sup>th</sup>	0 6 0	L Maintenance	L Maintenance	L Maintenance	<b>24th State SC Long Distance</b>
25 <sup>th</sup>	5 5 10	L Quality	L Quality	L Spec End	
July					
2 <sup>nd</sup>	4 4 9	M Quality	M Quality	M Spec End	7 <sup>th</sup> Sale Interclub
9 <sup>th</sup>	3 3 8	H Quality	H Quality	H Spec End	
16 <sup>th</sup>	2 2 7	L Quality	L Quality	L Quality	21 <sup>st</sup> Casey Seals Interclub
23 <sup>rd</sup>	1 1 6	H Quality	H Quality	M Quality	
30 <sup>th</sup>	0 0 5	L Taper	L Taper	L Maintenance	<b>4th Aug State SC Champs</b>
August					
6 <sup>th</sup>	4 8 4	L Spec End	L Gen End	L Spec End	
13 <sup>th</sup>	3 7 3	M Spec End	H Gen End	M Spec End	18 <sup>th</sup> – 25 <sup>th</sup> Mildura Masters

Date	Weeks to Major Comp (SC/ NC/ OW)	Emphasis			Comments & Competitions
		State Champs	National Champs	Open Water/ Distance	
August					
20 <sup>th</sup>	2 6 2	H Spec End	M Spec End	H Spec End	25 <sup>th</sup> Hoppers Crossing Interclub
27 <sup>th</sup>	1 5 1	M Quality	H Spec End	M Quality	
September					
3 <sup>rd</sup>	0 4 0	M Maintenance	L Quality	M Maintenance	<b>8th State LC Distance Champs Day 1</b>
10 <sup>th</sup>	0 3 0	L Taper	M Quality	L Taper	<b>15th State LC Distance Champs Day 2</b>
17 <sup>th</sup>	2	L Recovery	H Quality	L Recovery	
24 <sup>th</sup>	1	L Pre Season	M Taper	L Pre Season	
October					
1 <sup>st</sup>	0	M Pre Season	L Taper	M Pre Season	5,6,7 <sup>th</sup> Aust Masters Games

## KEY to Table 1

L = Low Mileage      M = Medium Mileage      H = High Mileage

**Recovery** – Low Intensity Aerobic Base and Aerobic Endurance/ Moderate volume/ Emphasis skills & technique.

**Pre Season** – Low to Moderate volume. General work on all strokes and IM; some HVO's; emphasis on technique and skill development.

**Maintenance** – Low to medium volume with mixed intensity sets to maintain all energy systems.

**General Endurance** – Increasing volume of main stroke/s (less stroke switching) Focus on technique. Aerobic Base plus **Aerobic Endurance Sets** – Some higher intensity sets introduced.

**Specific Endurance** – Maintain Aerobic base but include more race specific high aerobic end (critical velocity & Max VO<sub>2</sub>) sets.

**Quality** – Reduced volume but slight increase in Lactate and Sprint sets/Race pace.

**Taper** – Maintain some intensity but reduce volume of all sets and overall volume.

### Targeted Competitions:

- April 22<sup>nd</sup> – State LC Championships
- May 4<sup>th</sup>-7<sup>th</sup> – MSA National Championships
- June 17<sup>th</sup> – State SC Long Distance Day 1
- June 24<sup>th</sup> – State SC Long Distance Day 2
- August 4<sup>th</sup> – State SC Champs
- September 8<sup>th</sup> – State LC Distance Champs Day 1
- September 15<sup>th</sup> – State LC Distance Champs Day 2

### Note:

- Weeks Begin Monday
- Annual Plan begins week following State LC Distance Champs
- Unless indicated otherwise in the “Weeks to Major Competitions” column, all groups will swim as per the State Group.

**Table 2: An example of a three week Endurance Macrocycle**

	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	Total
Week One Low		Anaerobic Threshold Best Stroke  HVO's F/S  3.5km		MVO2 F/S  Aerobic drills No F/S  Sprint Kick Best Stroke 3.8km		Anaerobic Threshold Test 1 F/S 30x50m on .60  HVO's No F/S 3.5km	Club Aerobic Trophy 400m   1.5km	11.3km
Week Two Med		Anaerobic Threshold F/S  HVO's IM or no F/S  3.8km		MVO2 Best Stroke  Aerobic drills F/S  Sprint Kick No F/S 4.0km		Anaerobic Threshold Test 1 F/S 18x100m on 1.40  HVO's Main Stroke 3.8km	Club Aerobic Trophy 800m   2.0km	13.6km
Week Three High		Anaerobic Threshold Best Stroke  HVO's F/S  4.5km		MVO2 F/S  Aerobic drills No F/S  Sprint Kick Best Stroke 4.2km		Anaerobic Threshold Test 1 F/S 10x200m on 3.15  HVO's No F/S 4.0km	Club Aerobic Trophy 1500m   2.5km	15.2km

## Structuring a training session

Knowing how to train each energy system and being able to devise sets accordingly is critical in crafting a session. Coaches should know their swimmers well and ensure sufficient training background prior to scheduling explosive speed sets or any other high intensity sets. Similar precautions should also be used when scheduling any activity that requires breath holding. Fatigue and how it accumulates throughout the training session is one of the most important considerations when structuring a session. However, coaches are divided on the merits of swimming with undue fatigue if technique deteriorates.

Training sessions, regardless of the training emphasis, should include these elements:

- warm-up
- speed work
- aerobic endurance
- skill practice
- recovery or cool down

### Warm-up

Use all muscle groups in a non-specific activity that is gentle but gives a wide range of movement, then stretch. Follow on with a short to modest set of aerobic endurance which prepares the body for the harder work to come. The warm-up is a perfect time to incorporate any drill and technique work. It's better to allow some easy swimming and stroke switching to loosen up in warm-up because older adults tend to be stiffer in the joints and need a wider range of movements to really loosen up. They may also need longer to truly warm up. Loosen up swims should also be given after kicking sets where arms are sometimes immobilised, or sets using hand paddles.

### Speed work

Short repetitions with complete recovery. Speed *assisted* swimming such as using fins or surgical tubing, trains the body to adapt to swimming at speeds *faster* than have been reached previously. Speed sets placed early on in the session; improve initial explosive speed and power. Speed work placed toward the end of the session trains the swimmer to sprint with some residual fatigue such as in the closing stages of a 50m race or where multiple events are performed.

### Aerobic endurance

Aerobic endurance can loosely be defined as any low intensity work that maintains an elevated heart rate over a reasonably long period of time. Depending on the training outcome required and the background of the swimmer, the heart rate range will be anywhere from 20 beats below maximum (bbm) to 50 or 60 bbm. Sets will last anywhere between 15 minutes and 2 hours. Sets can be designed to include all strokes, drill work, kicking and pulling. Sets with repetitions of 50m or longer with short

rests, are ideal to prevent the heart rate from dropping too much.

### **Skill practice (starts and turns)**

Highly skilled swimmers may have a time component incorporated into skill sets. For instance when practicing dives, the coach may time the dive and the first 15m (to the false start rope) to set benchmarks against future improvements. Novices and less skilled swimmers, however, may require more skill based teaching. As with all skill work, the coach can break a skill down into its basic components by devising drill progressions which increase in complexity as the swimmer gains mastery.

### **Recovery or cool down**

Most coaches would agree that the main purpose of a cool down is to recover enough that no residual fatigue or lactic acid is carried over into the following session. The length of the cool down will therefore reflect the nature of the training session. Higher intensity sessions generally require longer cool downs. Stretching during the cool down can also be included.

### **Individualising the training session**

Wherever possible, the more lanes you have, the more a coach can cater to individual needs. Working with three lanes or more is ideal so you can divide swimmers into different ability groups, different strokes, or different distances (i.e. distance/middle distance or sprinters). Even within a lane, coaches can give multiple time intervals for a set to cater for differences in speed, fitness and training goals. This requires a large degree of planning and organisation, presenting many challenges for the coach in devising sets and time intervals that meet the needs of swimmers, with little or no interference, disturbance or disruption to those within the lane.

Table 3 on the next page shows a typical plan for a 90 minute training session swum in a 25m pool. The group has been divided into three abilities, each in their own lane.

Table 4 overleaf is a fitness/endurance based session catering for four different ability groups with two lanes in a 50m pool over a 90 minute period. Any swimmer who falls outside these groups could still be catered for by the coach with minimal disruption to the lane. For instance, a novice could use fins on the main D set in order to stay with the group. A reduction in distance could be given on other sets. Similarly, exceptionally fast swimmers could have volume increased for the same time period, or a reduced departure time with a corresponding increase in volume.

Another way to individualise the training session to cater for varying abilities is to give swimmers different training goals within a particular set. For example:

- Faster swimmers on a longer time interval may be asked to swim at maximum speeds while the slower swimmers may be asked to swim off the same time interval but at steady speed.
- Faster swimmers choose a stroke other than freestyle (or individual medley) while slower

swimmers swim freestyle. This is particularly useful where there are only a couple of faster swimmers in the lane. Many coaches avoid combining freestyle with form strokes and/or medley work because they are a bit more awkward to arrange, but with practice, this can be effective.

- Equipment can also be used to individualise training sessions to cater for varying abilities. For example, fins may be used to allow slower swimmers to complete a training set on the same time interval as the faster swimmers. Alternatively, faster swimmers may be given some form of resistance equipment to achieve the same result.

**Table 3: Session plan for 90 minutes in a 25m pool; three ability groups in separate lanes**

Type of Set	Novices	Medium Group	Fast Group
1. Warm up	300m as (75m F/S + 25m choice) x 3	400m as (75m F/S + 25m choice) x 4	500m as (75m F/S + 25m choice) x 5
2. Aerobic stroke drills Backstroke	3 x (50m swim + 100m drill) 20 sec rest	4 x (50m swim + 100m drill) 15 sec rest	4 x (100m swim + 100m drill) 10 sec rest
3. Main Set – Anaerobic Threshold Free- style. Fastest speed while maintaining long strokes and good technique.	5 x (150m - 30 sec rest, 100m - 20 sec rest, 50m - 10 sec rest)  Aim to hold < 25 strokes/25m	4 x (200m on 4.00, 150m on 3.00, 100m on 2.00, 50m on 1.00)  Aim to hold < 23 strokes/25m	5 x (200m on 3.20, 150m on 2.30, 100m on 1.40, 50m on .50)  Aim to hold < 20 strokes /25m
4. Sprints – Main stroke <u>kick</u>	8 x 25m max on 1.00	10 x 25m max on .55	12 x 25 max on .50
5. Cool down	100m choice drills	150m choice drills	200m choice drills
Session TOTAL	2,550m	3,400m	4,300m

**Table 4: Fitness/endurance-based session; four ability groups**

Set type & distance	LANE 1		LANE 2	
	Fastest (Group A)	Fast (Group B)	Slower (Group C)	Slowest (Group D)
<b>Warm Up</b> A=800m B=700m C=600m D=500m	(200mF/S loosen 2X (up @3.15 (4x50 IM @ .55  1 <sup>st</sup> Set Reverse order IM 2 <sup>nd</sup> Set as Correct order IM	(150mF/S loosen 2X (up@2.45 (4x50 IM @.60  1 <sup>st</sup> Set Reverse order IM 2 <sup>nd</sup> Set as Correct order IM  WU = 13.50	(100mF/S loosen 2X (up@2.00 (4x50 IM @.1.10  1 <sup>st</sup> Set Reverse order IM 2 <sup>nd</sup> Set as Correct order IM  WU = 13.30	(100mF/S loosen 2X (up@2.15 (3x50 IM @.1.20  No Fly on IM  WU = 12.50
<b>Anaerobic Threshold</b> A=1.8k B=1.6k C=1.4k D=1.2k	36x50m Free@.50  Every 4 <sup>th</sup> 50m Back building speed on .55  Main Set = 30.45 min	32x50m Free@.55  Every 4 <sup>th</sup> 50m Back building speed on 65  Main Set = 30.45 min	28x50m Free@.65  Every 4 <sup>th</sup> 50m Back building speed on 1.15  Main Set = 31.30 min	24x50m Free@ 1.15  Every 4 <sup>th</sup> 50m Back for technique on 1.30
<b>Breast. Drills</b> A=1000m B=800m C=700m D=600m	2 x 400m Brst drills – .60 Rlas:  50m 4 x pull/1x kick 50m 3 x pull/1 x kick 50m 2 x p/1 x k 50m swim ≤ 25 strokes 100m pull (with buoy) 100m Kick + 200m f/s loosen up  Drill = approx 18 min	2 x 300m Brst drills – .60 RI as:  50m 4 x pull/1x kick 50m 3 x pull/1 x kick 50m 2 x p/1 x k 50m swim ≤ 25 strokes 50m pull (with buoy) 50m Kick +200m Loosen up F/S  Drill = approx 18 min	2 x 300m Brst drills – .60 Rlas:  50m 4 x pull/1x kick 50m 3 x pull/1 x kick 50m 2 x p/1 x k 50m swim ≤ 25 strokes 50m pull (with buoy) 50m Kick +100m Loosen up F/S  Drill = approx 15 min	2 x 250m Brst drills – .60 RI as:  50m 4 x pull/1x kick 50m 3 x pull/1 x kick 50m 2 x p/1 x k 50m swim ≤ 25 strokes 25m pull (with buoy) 25m Kick +100m Loosen up
<b>Sprint</b> A=600m B=600m C=500m D=500m	4 x 100m @2.00 as 25m max/75m EZ + 4 x 50m @ 1.15 Main stroke as 50m max/50m EZ  Sprint = 13.00 min	4 x 100m @2.00 as 25m max/75m EZ + 4 x 50m @ 1.15 Main stroke as 50m max/50m EZ  Sprint = 13.00 min	4 x 100m @2.15 as 25m max/75m EZ + 4 x 50m @ 1.30 Main stroke as 50m max/50m EZ  Sprint = 16.00 min	3 x 100m @2.30 as 25m max/75m EZ + 4 x 50m @ 1.45 Main stroke as 50m max/50m EZ
<b>Cool Down</b> A=200m B=200m C=100m D=200m	1 x 200m F/S with Finger Tip Drag (FTD)  CD = 3.00	1 x 200m F/S with FTD  CD = 3.00	1 x 100m F/S with FTD  CD = 2.00	1 x 200m F/S with FTD  CD = 4.00
<b>Total</b>	4.4km	3.9km	3.3km	3.0km

The decision on which modification to implement to cater for varying abilities, should be based on which modification is most likely to achieve the desired training outcome for the individual swimmers involved. Working out the total length of time each set is expected to take is a great way of ensuring that each group finishes each set at about the same time and/or that the program can fit the allotted time. Table 5 (overleaf) gives various examples of how training sets can be individualised to cater for varying abilities. An explanation for each example is given below. Many of the examples can also be adapted to a single 50m lane if necessary (i.e. have all three groups in one lane). This can work, as long as lane etiquettes are observed.

*Example 1*

A set where the groups start and finish together. Swimmers swim for a set period of time, but faster swimmers complete a greater volume of work in the same amount of time.

*Example 2*

A set where rest periods are the same but number of repetitions in the set increases according to ability, in turn increasing total volume swum. This example caters for six different groups.

*Examples 3a and 3b*

Sets where length of repetition varies but time interval is the same.

*Example 4*

A set where all groups do the same program but equipment is used so all swim at the same speed.

*Example 5*

A set where intensity is varied for fitter faster swimmers or those needing specific speed work or training different energy systems.

*Example 6*

A program that caters to different requirements of Distance, Middle Distance and Sprint Swimmers, subdivided further into ability time intervals. Lanes work independently of one another, but groups work together within the lane.

Adult swimmers often like to have input into their programming. Giving a swimmer the opportunity to choose their stroke/s works well, particularly for competitive swimmers with a specialty stroke. Table 6 (overleaf) gives an example of sets that allow swimmers to choose their stroke and place themselves in an appropriate lane for the speed of the stroke chosen.

**Table 5: Catering for individual differences**

Example	Group	Novice - Lane Lane 1	Intermediate - Lane 2	Advanced - Lane 3	Total time of set
1	1	4x5 minute swims depart on 7.00	4x5 minute swims depart on 7.00	4x5 minute swims depart on 7.00	26mins
2	1	12x 50m F/S – 15 secs/50m	16x 50m F/S – 15 secs/50m	20x 50m F/S – 15 secs/50m	Approx. 20mins
	2	10x50m F/S – 15 secs/50m	14x50m F/S – 15 secs/50m	18x50m F/S – 15 secs/50m	
3a	1	4x300m on 7.00	4x400m on 7.00	4x500m on 7.00	28mins
	2	4x250m on 7.00	4x350m on 7.00	4x450m on 7.00	
3b	1	10x75m F/S on 2.00	10x100m F/S on 2.00	10x125m F/S on 2.00	20mins
4	1	10x100m F/S on 2.00 Fins	10x100m F/S on 2.00	10x100m F/S on 2.00 with drag suit	20mins
5	1	40x25m F/S on .40 steady pace (Aerobic)	40x25m F/S on .40 Odds EZ- Evens FAST (Alactic)	40x25m F/S on .40 Max Effort with Dives (Lactic Tolerance)	26mins 30secs

Example	Group	Sprinters	Middle Distance	Distance
6	1	10 x 100m on 3.30 as 25m with dive, max 75m EZ swim down	10x200m F/S on 3.30	800m on 12min 400m on 6.00 200m on 3.00 100m on 3.00 x2
	2	10 X 75m on 3.30 as 25m with dive, max 50m EZ swim down + walk back	10x 175m or 150m F/S on 3.30	700m on 12min 300m on 6.00 150m on 3.00 50m on 3.00 x2

**Table 6: Allowing swimmers to choose their stroke**

Example	Lane 1 Slower	Lane 2 Medium	Lane 3 Faster	Total time of set
1	10x75m F/S or Stroke on 2.00	10x100m F/S or Stroke on 2.00	10x125m F/S or Stroke on 2.00	20mins
2	8x100m Choice on 2.30	9x100m Choice on 2.15	10x100m Choice on 2.00	20mins

Table 7 gives an example of sets that divide the swimmers into lanes based on stroke, with length of repetition varying but the time interval remaining the same. In this example, a freestyle specialist could still swim in the lane with the most appropriate time interval even though it is not stipulated.

**Table 7: Swimmers in lanes based on stroke**

Group	Breaststroke	Backstroke	Medley	Total time of set
1	4x200m on 5.00	5x200m on 4.00	5x200m on 4.00	20mins
2	4x175m on 5.00	5x175m on 4.00	5x175m on 4.00	20mins
3	4x150m on 5.00	5x150m on 4.00	5x150m on 4.00	20mins

### The 'mixed bag' session

An age-group program typically targets only one or two energy systems within a session, but because many sessions are scheduled within the week a balanced program can be structured. The Masters swimming coach may not have this luxury, as adults typically have busy lives and stresses that may not allow for as much, as intense, or even as consistent training. Instead, you can plan training sessions that give plenty of choice of strokes and include sets that work through all the energy systems. In this way the coach can guarantee that all swimmers get a little bit of everything they need or want. The art of coaching then comes into play, with the coach further modifying the session as required according to individual ability and goals of the swimmers in attendance.

Sets that increase in intensity are a good example of this, such as:

- 8 x 100m @ 70% effort on 1.40
- 4 x 100m @ 80% effort on 1.50
- 2 x 100m @ 90% effort on 2.00
- 1 x 100m max with dive start and timed

In the above example the total set is 1500m lasting 25 to 30 minutes which is essentially aerobic. Fitness swimmers could do it all at the same intensity while those training for competition would increase their speed as the set progresses, incorporating a variety of energy systems from aerobic base, to a small amount of lactic tolerance.

## Considerations when planning the program

As mentioned previously, older adults take longer to recover and also need longer to warm up.

It is best to precede the main set with a short sharp set to get the heart rate up and fully prepare the body for the harder work to come. Even 4 x 25m fast is ideal to complete the warm up. Alternatively a short set such as 10 x 50's on 60 is a good way to complete a warm up and to prepare the body prior for longer sets or more intense work.

If a swimmer is not up for a hard set on any given day because they look tired or stressed, save it for another day. Let them reduce the intensity. The art of coaching lies in knowing and being able to read swimmers by having a good understanding of the stresses going on in their day to day life. Good coaches are flexible and able to modify their program if it is not working.

Often swimmers arrive late, but still need to warm up thoroughly before joining in on the main body of work. Coaches need to find ways of accommodating these latecomers, usually by letting them swim slowly at the back of the lane.

## Tapering

Traditionally, as a season progresses, volume and intensity increases and is then tapered off to rest and refresh prior to the main competition for the season. This should lead to improved overall performances and hopefully, best times. However, improved understanding of balancing intense work with rest means some coaches are able to keep swimmers racing fast all year round.

The tapering process is entirely conditional on enough training being undertaken on a consistent basis throughout the season for it to be warranted. For those who are only training a few times a week, or do not have sufficient work behind them throughout the season, the taper will be at best, a reduction in intensity so the swimmer 'freshens up'. A fit adult will require a taper along the same lines as younger athletes (see Richards, R. *Coaching Swimming: An Introductory Manual*, pp.190–91)

In the week before competition, the swimmer should focus on removing stress, sleeping well, eating sensibly and stopping other activities which may interfere with their recovery (e.g. gym work). The total of each training session may be reduced as well as the volume of each training set. High intensity sets will remain but should be reduced in overall volume. Swimmers can use training in this week to practice their pre-race warm-up routines and finetune race skills. Too much rest, changes in routines and fewer calories being burned can all have an adverse effect on performance. These factors should be monitored to ensure this does not occur. Sprinters and heavier-set people tend to need a longer taper period than lighter, leaner or distance oriented swimmers. Also, age-related physiological declines may warrant a shorter taper.

A swimmer who averages 3km per session three times a week could swim session one of that week at the usual 3km with a greater percentage of easy swimming. Session two could be reduced to 2km and session three could be as low as 1km. This step down approach can be applied for most people. Some intense swimming is still necessary, particularly under-distance speed work, but care should be taken to ensure a full recovery by the end of each swim, with no residual fatigue.

## Summary

The unfit, novice adult swimmer has significantly different aims from a 20 year old, fit, experienced swimmer or an older swimmer returning to exercise after a protracted illness or surgery. The Masters swimming coach plans for such a disparate group using a threefold process which involves setting or assessing goals, planning the program, and structuring individual training sessions.

A wide body of research has concluded that goal setting is an effective technique for enhancing athletic performance. Through the application of the SMART goal setting process, the coach can guide swimmers in setting effective goals in both the short and longer term. Goals should be specific, measureable, achievable, realistic, and time-phased. Outcome goals provide the overarching motivation for achievement, while process goals deliver its means. Short-term goals provide the vehicle for achievement of long-term goals.

The most successful coaches aim to cater for a variety of individual needs through careful systematic and periodised planning. The planning process consists of an annual plan which is an overview of the year showing major and minor competitions and other important dates; mesocycles which are further subdivided into smaller blocks called macrocycles; weekly outlines; and finally, the session plan. The art of coaching is then employed to individualise the program for each swimmer in the squad.

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