



Vol 07 Issue 1

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The World Swimming Coaches Association

NEWSLETTER

Relating Training Times to Goal Times

TEST SET TIMES THAT PREDICT GOAL TIMES

By Bob Steele, USA

As a swimmer in the late 1950's I experienced two test sets that related directly to personal goal times. As a coach I continued to use these test sets for 45 years and asked the USA-S researchers why these things worked so well. The explanation was that they used the same energy systems in racing as they used in training; therefore, the training focused on race preparation and directly motivated swimmers toward achieving their goals.

For these to work, swimmers must know how to figure their exact average time on a set. If they start to give their time by saying "about" they haven't figured their exact time and the formula will not work. Follow this routine to teach them how to figure their exact average. For anaerobic training, "straight set" training is critical. The first and last swims are done as fast as the swimmer can move on the WHOLE set.

100 Prediction: Figure the exact average on 6 x 50 @ 2 min. send-off

AVERAGE TIME ()x2= ____:____.____

200 Prediction: Figure the exact average on 5 x 100 @ 3 min. send-off

AVERAGE TIME ()x2=____:____.____

500 Prediction: Figure the exact average on 6 x 250 @ 5 min. send-off *

AVERAGE TIME ()x2=____:____.____

1000/1650/1500 Prediction: Figure the exact average on 20 x 100 @ 1:05 or 1:10 or 1:15 (Whatever gives about 15 sec. Rest)

AVERAGE TIME () x 10 for 1000
15 for 1500
16.5 for 1650

* These are not as reliable for prediction.

continued on page 2 >>>

2007 ASCTA Conference

Sofitel Hotel, Gold Coast, Australia - May 1-8, 2007

2007 DSTV Clinic

Braunschweig, Lower-Saxony, Germany - May 4-6, 2007

AVERAGING TIMES FOR PREDICTION

To figure your exact average time follow this procedure

- 1) Estimate a fast goal average that you think you can achieve on the set. You need to work toward one-half of your goal time.
- 2) Start you set, and as you swim the repeats remember the cumulative number of seconds you are over or under your desired average.
- 3) Here's a sample with a desired goal of 1:02.0

Swim	Time	+/-	Cumulative Seconds*
#1	1:00	-2	-2
#2	1:01	-1	-3
#3	1:01	-1	-4
#4	1:00	-2	-6
#5	1:02	0	-6 <i>(Swimmer fell apart at the end.)</i>

* Figure the cumulative total as you swim the set.

- 4) When finished, change the -6 seconds to 10ths just by adding a 0 (-.60) and divide that number by the number of swims (5).
- 5) This gives you the number of tenths (.12) over (+) OR under (-) the desired goal average of 1:02.0.
- 6) Now subtract 1.2 from the desired goal average for a 1:00.8 exact average time. (Add it to 1:02.0 if it was a +12 for a 1:03.2).
- 7) If you were predicting a 200 time the swimmer would be capable of swimming a 2:01.6 for the 200 at this time of season because the 100 average time is doubled for a 200 prediction.

USE THE FOLLOWING CHART FOR YOUR SWIMMERS TO PRACTICE

100 Prediction	200 Prediction
Push-off set:6x50@2	Push-off set:5x100@3
Desired Goal Ave __:__.__	Desired Goal Ave __:__.__
Swim +/- Cum	Swim +/- Cum
Time Sec Sec	Time Sec Sec

As fitness improves and a plateau is met, increase the number of swims by 2-4.

STANDARDIZED TEST SETS

There are many test sets used by coaches to develop aerobic, anaerobic, or speed for racing. Here are a few that may be repeated as the season progresses. Keep a team roster sheet for each test set in a loose leaf binder and record each swimmer's average time or predicted time as the sets are repeated during the season.

**Michigan Prediction Program
Multiply Average Time by Factors**

(Performed from a dive.)

	Stroke	200	100
MID-SEASON 8x100@8	FREE	2.04	.926
LATE-SEASON 6x100@8	BACK	2.03	.937
PRE-TAPER 4x100@8	BREAST	2.05	.944
	FLY	2.04	.936

Jon Urbanchek

Test sets may be repeated regularly to assess improvement in the level of fitness. Combine with pulse counting and stroke counting for more accurate measures.

RACES 200 yards and less.

Number in () is the breathing pattern per stroke or 25 yds.

P/O 16x15 yds. (0)@30	Broken/Straight P/O	5x100@4 to 8
P/O 12x20 yds. (0)@40	B/S P/O	8x200@4 to 8
P/O 8x25 yds. (0)@45	10 x 50 @ F 30, Bk 35, Bst 40, Fly 35	
Dive 4x100 (2331/25)@4 or	4x400@7	P/O stroke
(3 swimmers alternating)	6x50@2	
P/O 7x100@1:15 to 1:25	5x100@3	

WSCA

WORLD SWIMMING COACHES ASSOCIATION



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Name of Team _____

Address Home/Work (please Circle) _____

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Province _____ Country _____

Phone _____ Fax _____ Email _____

My Primary Language is _____

(Members must submit proof of membership in national coaches association or similar organization)

"A Rising Tide Lifts All the Boats!"

Be a part of the rising tide of the World Swimming Coaches Association

The World Swimming Coaches Association exists to elevate the profession of coaching swimming in the international sporting arena, to a position of influence and to improve swimming. WSCA also provides and develops international friendship and support of coaches, elevates the level of coaching in all nations, and increases public awareness of the good work that swimming coaches perform in all nations. Coaching Education is a primary function of the Association.

Make Checks Payable to :
WSCA
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If Submitting Bank Draft, amount must be in US dollars drawn on a United States Bank

I would like to contribute to the WSCA fight against drug use in swimming. I have enclosed an additional amount to be used in the Fight Against Drugs...

\$5.00 \$10.00

\$20.00 \$ _____

MC / VISA / AMEX # _____ Exp. _____

SIGNATURE _____

MEMBERSHIP OPTIONS

Individuals with current membership in National Organization (must supply proof of membership)	Individuals whose nation does not have a National Membership in WSCA	
WSCA (U.S.)	\$35.00 <input type="checkbox"/>	\$45.00 <input type="checkbox"/>
WSCA (Canada/Mexico)	\$40.00 <input type="checkbox"/>	\$50.00 <input type="checkbox"/>
WSCA (Other International)	\$50.00 <input type="checkbox"/>	\$60.00 <input type="checkbox"/>
LIFE MEMBERSHIP (one time Payment)	\$500.00 <input type="checkbox"/>	\$600.00 <input type="checkbox"/>
Joint Memberships		
ASCA/WSCA (U.S.)	\$100.00 <input type="checkbox"/>	
ASCA/WSCA (International)	\$125.00 <input type="checkbox"/>	

(All Amounts Are US Dollars)

Thank You!



Australia: Hackett eyeing long-standing world mark

Swimming superstar Grant Hackett signaled today that breaking his 1,500m world record would be a priority at the upcoming world championships in Melbourne.

With his recovery from shoulder surgery - which sidelined him from the Commonwealth Games - complete, Hackett says his best is yet to come, and he's confident of unleashing it when he takes on the world at Rod Laver Arena in March.

Hackett set his freakish 14min 34.56sec world mark five years ago at the world's in Japan.

And making up for lost time was on the Queenslander's mind today, as he declared himself mentally freshened and physically ready to raise the bar following his long stint out of the pool.

"My 1,500 (world record) time I did back in 2001 and I think I'm a much better swimmer now," Hackett said.

"It's a matter of putting it together on the day.

"I enjoy it, I'm passionate about it and I really feel within myself that I haven't seen my best performances.

"I haven't seen my fastest 200 or 400 or 800 or 1,500 times - I feel I can improve."

Hackett made his competitive return at the Australian short course titles in Hobart in August, setting times not far off his best.

The 26-year-old set the fastest 400m time in the world this year, then clocked the second quickest time ever for the short course 1,500m.

"Based on my results at Australian short course, my preparation wasn't too wonderful but I was still able to get up and produce good times," he said.

"I might have to go near my world record the way the competition's improving in the 1,500m freestyle.

"People are coming up all the time and the depth's better than I've ever seen it before."

Hackett's 1,500m kill at the worlds is likely to be a far easier one than he lets on.

But even then he is taking no chances and is cutting back his usually grueling world's program.

He will ditch the individual 200m freestyle for Melbourne, swimming the event at the national trials only with an eye to being part of the men's 4x200m relay team.

"I've dropped the 200m freestyle as an individual and I think that's going to allow me to be a bit more capable than I was in Montreal (at the 2005 world's) to get a personal best time over the 1,500."

Hackett will also attempt the 400m and 800m.

As Hackett today inspected the Rod Laver Arena, where a drop-in Olympic-sized pool will be installed for the world championships, tickets went on sale for the event.

Nearly 20,000 tickets had been sold by 4pm for the upcoming FINA world championships, which encompass open water swimming, synchronized swimming, diving and water polo as well as swimming. ●

Selective Notes from the ASCA World Clinic by a Clinic Participant

Editors Note: It is always interesting when a coach writes their "new to me" ideas on the talks they heard at the world clinic. This one is particularly interesting. An excellent "selective review."

JOHN G. MILLER: FLIPPING THE SWITCH

Don't blame. Ask (yourself) the QBQ (question behind the question).

COACH HARVEY HUMPHRIES: LEVEL 3, PHYSIOLOGY

Explained the 7 energy levels really well. Stressed the importance of using the same basic vocabulary to better communicate among coaches. I better understand how to write out a good work-out.

COACH PURSLEY: "WHAT I'VE LEARNED FROM COACHING"

No hidden coaching secrets. We already know what it takes to be a good coach. Biggest disappointments were blessings in disguise. Value of enthusiasm.

JOHN ATKINSON: "CREATING QUALITY YOUTH AND AG PROGRAMS"

Need to strike the right balance between endurance and stroke technique with youth. Feeder systems - paramount importance. Learn to Swim Programs. Speak and communicate with efficiency.

GEO. BLOCK INTERVIEWS: "THINKING OUTSIDE THE BOX"

Chuck Wielgus Importance of tv and corporate sponsors, to our sport. USA-S and US Olympic Committee need to come together. New swimming message to promote sport: a) water safety b) fight obesity c) diversity.

COACH RICK CURL: "REBUILDING A FORMERLY GREAT SWIM TEAM"

"Swimming is an asset for life." Distance is good. There is no magic wand. Encourage individual record keeping - log books. "Resisting change is like holding your breath - If you succeed, you die." Risk and Reward. Think big. "Success is the journey, not the destination." Take a risk - put athlete in 1 sport (swimming). Unite swim school and swim team. Conclusion: a) Swimmer-centered b) Coach-driven c) Parent-supported. Go as far as "The Good Lord allows."

COACH FRANK BUSCH: "KICKING, A FOUNDATION FOR SUCCESS"

Simon Burnett, U of Az., 1:31.20 200 free - omg. (43.++ & 46.++) Bow and arrow kick - all kick - 12 beat. Great kick=good body position, better catch, maintains forward momentum, kick from core, fins and snorkels for speed. Run to build strength in first 6 weeks. Board kicking vs. snorkel kicking. Snorkel =good head position for swimming. Body operating on impure gas. When you take off snorkel, you can go further. Train body to swim further, faster. Train with high heart rate. Ankle flexibility very important. Need consistent practice and meet kicking.

Frank gave up one practice a week this year, to give kids more sleep time. Kick long course to avoid walls. The team kicks together - sprinters and long distance athletes, approx. 3,200 yds. Underwater kicking, vertical kicking (18 in 6 seconds), fast feet, emulate the best. Increase heart rate and lactic acid. "Kick your Kids."

COACH TIDWELL: SPEEDO WOMEN'S COACHING GROUP MEETING

Women coaches need to include friendship among women while we foster, grow and develop mentoring.

MEL GOLDSTEIN, ERIC NEILSON AND BOB BRUCE: MASTERS SWIMMING DISCUSSION PANEL

Promote that swimming is a Life Sport. One of the best bits of advice for Masters swimming is to start and end all athletes together, regardless of distance being swum. Simultaneous send offs. Masters is the step-child of USA-S. Promote: Seniors Get Fit. Treat and refer to participants as athletes. (Slow lane=cruiser lane) Never turn anyone away. Include everyone. As a coach, establish your indi. credibility without bragging. Problems facing Masters swimming programs: a) You do not have to be an accomplished swimmer to participate. b) It is not an elitist program c) Coaches need to be paid (well). Approach it as an Adult Aquatic Fitness Program. Structure to include both genders. The program will flourish under a good coach. Goals: identify, recruit and retain. Needs: pool time, coach and programming Potential grants by Nike (\$1,500?) and ASCA (\$250. registration?) Masters certif. soon available on line. ASCA vs. USMS. Investigate postal swims.

COACH CHUCK WARNER & EDDIE REESE: TRAINING AND TECHNIQUE DISCUSSION

Increase the strength but maintain dps. When physical maturation stops, give them more work. Change things up so body won't adjust to doing the same things. In practice, build lactate early, then do aerobic work.

COACH MARCUS O'SULLIVAN: "UNDERSTANDING THRESHOLD FROM A RUNNER'S PERSPECTIVE"

Keep a log. Create and improve oxygen carrying capacity. Work in ranges. Redline- Start running whole distance at 88% to 92%. www.athletics.villanova.edu/runnova/

MICHELLE BERNAL-SWEENEY: "BACKSTROKE STARTS AND TURNS"

Start with legs and hips - not arms. Arms around - not straight back - on start. Back Start Drill - a) place hands and feet b) throw head back but don't let go. c) Push back in pike, no arch

LARRY SHOFÉ: FREESTYLE TECHNIQUE

Value of relaxed recovery - shake wrists Closed fist drill - use forearm. Count strokes.

DR. WILLIAM PARKINSON: "COACHES' AID FOR REAL-TIME HEART RATE MEASUREMENT"

He invented the touchpad! Size of ipod; put in cap after race while warming down.

DR. MONIKA SCHLODER: "PHYSICAL PREP OF STARTS, TURNS AND FINISHES ON DRYLAND"

Importance of rhythm Importance of chin-up bar. 90 degrees is the most important angle in sports

COACH SEAN HUTCHISON: "HOW TO GET YOUR SWIMMERS TO GO FAST WITHOUT RUINING THEM."

Kick more. DPS and tempo = swimming speed

ANDI KAWAMOTO-KLATT: "PILATES FOR AG SWIMMERS"

Andi was inspirational with her instruction and I would like to sign up for a Pilates program at home and learn how to incorporate this into our AG program.

JOHN LEONARD, MODERATOR: "COACHING WORLD RECORD HOLDERS..."

Mark Schubert: "Promote swimming as a wholesome family image. Don't take clothes off for money."

Bob Bowman: Michael Phelps is in sport for performance, no to make money. Priorities are right. Each team member of USA Team receives \$16,000/yr. to help defray training costs.

Frank Busch: Priority of swimmer should be to progress.

REV. ED RICHARDSON: "MASTERING THE ART OF PRACTICE..."

Focus on process and outcome. Most of life spent during the process (not at end result). "The kids today actually like their parents."

TIM QUILL: NCAA DIVISION II COACHES MEETING

Discussed Spring Training and Captains' practices. College kids competing at USA swimming meets while still in college. Discussed the 8 + 20 hour rule. ●

Scotland: Why coaching depth is the key to a sport awash with cash

*DOUG GILLON, The Herald
December 14 2006*

The atmosphere at the Royal Commonwealth pool in Edinburgh yesterday was positively Australian.

TV and radio crews on the pool deck; microphones thrust under the noses of successful swimmers; bullish talk of future potential; and media hacks shuffling around with blue protective plastic booties over outdoor shoes.

And what's this? Medals?

We had best get used to this. Scottish swimming success is here to stay, even if Santa hats will never replace traditional caps. "A bit heavy in the water," opined the double Commonwealth champion, Gregor Tait.

Investment of £818,000 by sportscotland, which was announced yesterday, rewards efforts far beyond the pool in Melbourne where the Commonwealth Games team won a record 12 medals this year.

Often, sporting success in Scotland is of the "despite-the-system" variety, wrought in haphazard fashion from talent rather than method. However, on the run-in to the 2012 Olympics, those who disburse lottery largesse are looking for a system that works, and accountability. Scottish Swimming, more than any other sport, has delivered.

Lottery funding is available to all sports, but swimming, has harnessed it best and has been rewarded accordingly. They have a system, much of it thanks to national coach Chris Martin. This was inconceivable a few years ago. Rival governing bodies disposed to look enviously on a sport awash with cash should be attentive.

Scottish swimming had just five full-time paid coaches (more than athletics, for example) in 1998, and some 120 district squad swimmers. By the start of 2005 there were 16 full-time coaches, and many of the next tier of 40 also received some income, though often just small retainers. No

other Scottish sport coached to this level. Swimming coach education, development, and mentoring has reached a level beyond any other discipline.

Ashley Howard, chief executive of Scottish Swimming, said yesterday that their district squads numbered 350 in their first year, with 400 the target for next year, and 800 by 2012.

"We've upped it by 50 for the second year, not because we are reaching deeper down, but because despite our entry standards getting tougher, the kids have achieved them," said Ms Howard.

The elite proved the shock team of 2006. Kirsty Balfour, who set a UK record to win 200m breaststroke gold at the European short-course championships in Helsinki this month, and took 100m silver, says these medals were "a bonus. . . It's not one of the main meets of the year."

Tait explained: "We knew the rest of Europe was ready for the meet and we weren't. We trained right through, didn't taper which was was hard."

Their main goal is the World Championship in March, and the 2008 Olympics. In addition to pool work, they have a gym programme which no other group in Britain attempts.

"Talent only gets you so far," adds Tait. "I really enjoy the gym work. It's hard, but you see your body-shape changing. You might have to have a little bit of a screw loose to want to do it, and enjoy it. It's cheesy to say, but if you want to get results, you have to put in the hard work. You can't cut corners as a swimmer." ●

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SPECIFIC NUTRITIONAL NEEDS FOR FEMALE ATHLETES

By Dawn Weatherwax, R.D.

As a Dietitian who specializes in sports nutrition, I believe that females have specific needs. To begin, the majority of female athletes eat too little or too much of the wrong kinds of food. Eating too little could stem from the coach putting emphasis on weight and performance, other female athletes trying to “lose weight” because of poor body image, family dynamics at home or advertising efforts to be thin. If the athlete loves to eat, but the foods are high in saturated fat (fat that is solid at room temperature—butter or margarine) and/or high in simple sugar, they will be missing important nutrients as well.

The average American consumes one whole fruit or vegetable a day and the average athlete that comes into our office consumes at least three to five freebies a day (chips, donuts, sugary cereals, pop tarts, candy, fried foods, soda and fast food, etc.). When you don’t get enough nutrients the body will have trouble recovering, healing, preventing fatigue, and fighting off illnesses. Up to a 15% decrease in performance can be contributed to poor eating habits.

As far as nutrients that are important to the female athlete, calcium comes to the top of the list. A research study was done that showed if preadolescent girls (age 12 years, Tanner Stage 2) took a daily calcium supplement for 12 months, the percent gains in trabeculae (one of the two types of bone) bone mineral content increased by 5.83% versus the placebo group (0.69% respectively).

This means a 40% decrease in osteoporosis as an adult. The average female between ages 9-18 is only getting in 60% of the RDA. This may also be the reason why stress fractures are increasing among female athletes.

The one nutrient that many put too much emphasis on is iron. If the female athlete is consuming enough high quality protein a day, extra iron is not needed. In fact, extra iron is only needed if a medical reason suggests extra supplementation.

Protein is very important to maintain, repair and grow tissue. The goal is to get 7-20g of protein every three to four hours to optimize its function. If

Population Group	Calcium RDA, milligrams (mg)
Children	ages 1-3 500 mg
	ages 4-8 800 mg
Females	ages 9-18 1300 mg
	ages 19-50 1000 mg
	ages 51+ 1200 mg
Pregnancy, Lactation	<19 1300 mg
	19+ 1000 mg

an athlete is a vegetarian, it is very important they know how to get enough protein from meatless sources. (Please see a Dietitian for specific needs).

Other factors to consider are calorie needs, macronutrient breakdown (fat, carbohydrate, protein) and body composition. Calorie and macronutrient needs vary between females. Again, I personally suggest seeing a Dietitian who specializes in sports nutrition to figure these specific needs. Many female athletes go by magazines, TV, radio, parents and coaches for their nutritional needs; however, I have found that some of the information they receive is incorrect and not specific to their requirements.

Keeping track of body fat to lean weight can help monitor growth, training, and nutrition outcomes in a more positive manner. For the serious athlete, I recommend measuring body composition every three to four months. This will help monitor if the athlete is overtraining, gaining or dropping body fat too quickly and puts a positive spin on performance not weight.

Overall, the specific nutritional needs of a female athlete start with the basics. A female athlete needs plenty of fruits and vegetables, whole grains, lean meats (or vegetarian options), healthy fats (examples: nuts, seeds, natural peanut butter, avocado, olives, fish and flax) low fat dairy options and five to seven freebies a week. Eating enough calories, in the right mix, at the right time to meet the demands of competing at elite levels is a close second. Follow this with proper hydration, a high quality multivitamin, and possible calcium supplementation and the athlete is on their way to optimizing performance up to 15% with sports nutrition. Lastly, monitoring body composition can help the coach monitor training and how the athlete's body is responding to the demands.

You can train, train and train but if the nutritional needs are sub-optimal, performance outcomes will suffer eventually. ●

Dawn Weatherwax is a Registered/Licensed Dietitian with a specialty in Sports Nutrition and Founder of Sports Nutrition 2Go. (www.SN2G.com) She is also an Athletic Trainer with a Certification in Strength and Conditioning from The National Strength and Conditioning Association. Weatherwax is also the author of The Official Snack Guide for Beleaguered Sports Parents and The Complete Idiot's Guide to Sports Nutrition. She is an Official Speaker for the Gatorade Sports Science Institute and on the approval speaker list for the NCAA.

COACHES TIPS:

- Team up with a Dietitian that specializes in sports nutrition to promote healthy eating for performance.
- Have monthly presentations on nutrition related topics.
- Promote a healthy environment and avoid continuously putting emphasis on weight and performance, especially if you coach a sport that appearance is half the score. This could backfire and escalate disordered eating issues and increase injury rates.
- Any athletes with special nutritional needs must see the Sports Nutritionist. This allows the Coach to be a Coach.
- Have biweekly or monthly meetings on athletes' progress and how to address new nutritional issues as they arise.
- Must work as a team and have the same philosophy.
- Promote five to nine servings of fruit and vegetable servings a day (At least three to five servings of vegetables).
- Limit the freebies to one a day.
- Take a pharmaceutical grade calcium supplement starting around age 12 (Consult Dietitian for earlier ages). Recommend four tablets per day that provides 800 mg/d elemental calcium (as calcium citrate and carbonate), 400mg/d elemental magnesium (as magnesium citrate and oxide), 400 IU/d vitamin D3, boron and silicon, (two additional minerals thought to be essential for bone health, in trace amounts) 1.33 mg/d and 9 mg/d respectively.
- Take a pharmaceutical grade multivitamin/mineral supplement specific to age
- Measure body composition using a Bod Pod, DEXA scanning or hydrostatic weighing method at least twice a year. (Three to four times a year if elite athlete)