

# EAST LANE



## 100 X 100'S

Another successful session of 100 x 100's was completed February 29th. Unfortunately, it was done short course yards versus long course, but I don't believe anyone was complaining about being short-changed. We had 45 swimmers this year and about 30 finished the entire "set". Another big thank you goes out to Rutgers for again sponsoring our annual event. And hopefully this brought a nice conclusion to all those doing the February Fitness Challenge. Let the board know of any changes that you would like for this event as we plan for 2005. ☺



## HAVE A HEART (AND AN APPLE)

Everyone knows fiber is good for you: it's well established that a fiber-heavy diet can ward off colon cancer. But according to the new issue of the Archives of Internal Medicine, the fiber found in fruits and grains may also prevent heart disease by lowering blood pressure and cholesterol levels. (Surprisingly, in the AIM study, vegetable fiber didn't seem to have the same effect—though that may simply be because subjects chose to eat starchy, nutrient-poor veggies, like corn.) For every 10 grams of fiber from fruits or cereals the study's subjects ate, their risk of heart attacks dropped 14 percent, and their risk of dying from coronary heart disease dropped an amazing 27 percent. For similar results, try eating whole grains, green leafy veggies and fresh fruit. And don't rely on processed products: an orange has three grams of fiber, but juice usually has less than half a gram. ☺

—Mary Carmichael  
—Taken from 3/1/04 Newsweek

## RELAY ALL-AMERICANS

This year we had 23 relay All-Americans! This means that they were on at least one relay in one of the courses (SCY, SCM, LCM) that placed first in the nation during the 2002-2003 season! The following NJLMSC swimmers were relay All-Americans for 2002-2003:

Felix Berenskoetter . . . . .	28
Ryan Bise . . . . .	30
Paul Buren . . . . .	23
Amy Carow . . . . .	42
Christopher Chang . . . . .	29
Scott Dallamura . . . . .	25
Benn Doyle . . . . .	45
Tom Edenbaum . . . . .	37
Tom Geiman . . . . .	54
Oscar Gonzalez . . . . .	43
Darek Hahn . . . . .	36
Kevin Hopkins . . . . .	34
Rebecca Kalibat . . . . .	40
Daichi Kato . . . . .	25
Kelvin Li . . . . .	20
Jonathan Meer . . . . .	23
Edward Nessel . . . . .	58
Kenneth Niemi . . . . .	48
Curtis Sawin . . . . .	32
Chris Swenson . . . . .	21
Ed Tsuzuki . . . . .	45
Gregory Wriede . . . . .	26
Scott Yeomans . . . . .	39 ☺



## FLASH! FINA AWARDS 2006 MASTERS WORLD CHAMPIONSHIPS TO US MASTERS SWIMMING

March 12, 2004

By Phillip Whitten

DUBAI, UAE, March 12. FINA—swimming's international governing body—has awarded the XI FINA World Masters Swimming Championships in 2006 to the USA, FINA Vice President Dale Neuburger said today from Dubai, where FINA is conducting a meeting of its Executive Committee.

The award was made to United States Aquatic Sports (USAS), with the event to be hosted by United States Masters Swimming (USMS) and its local organizing committee, Pacific Masters Swimming (PMS).

The two week-long "celebration of fitness," in the words of USMS President Jim Miller, M.D., will include competition in swimming, open water swimming, diving, water polo and synchronized swimming. The swimming, and most of the other events, will be held at Stanford University in August, 2006.

"The way we're setting up the venue," the president said, "will allow the participants in each discipline to witness and support the athletes in the other disciplines. Dr. Miller had made hosting the World Championships a cornerstone of his presidency. Reached tonight on his way to a swim meet in New York, Dr. Miller said he was "delighted" with the FINA decision.

"This is an incredible opportunity for US Masters Swimming to showcase our great sport and the amazing people that make it up," he said. "It's also an opportunity for our wonderful committees to work together as a family to achieve a shared goal.

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## FITNESS TO COMPETITION *by Suzanne Rague*

Are you a Masters swimmer who does not swim Masters competitions? Do you love to swim but conventional swim meets don't excite you? Then, you are known as the "fitness swimmer," and you make up an estimated 50-60% of all Masters members.

A great thing about being an adult swimmer is that you are able to define your own goals, and those are more likely to be fitness, stress reduction, and camaraderie than being a competitive shark. But being a fitness swimmer doesn't mean that you wouldn't benefit from having goals to work towards, participating in an occasional event with friends, and going out afterwards for pizza or burgers.

There is a way for fitness swimmers to get more out of swimming and the Masters program without betraying their fitness identity. For the answer, we need to look at running, where fitness runners routinely enter 5-mile, 10-K, and mini- and full-marathon events. These are events which are looked forward to, entered with friends, and part of many recreational runners' fitness programs.

Recreational runners generally do not participate in the 100 meter dash or 110 meter hurdles at track meets. Those events are too dissimilar to their everyday running. But in swimming, novice competitors are steered to the 50 free or other short events. An all-out sprint where the racing dive and full-speed turn consume 25% of the race? No wonder experienced lap swimmers feel like a fish out of water at their first meet!

It is time for some original thinking. What do you like to swim? What do your workouts prepare you for? How are you comfortable moving in the water? For most of us, this would be a longer freestyle event—maybe a 500, 1000, or 1650 yard freestyle—or even a one mile open-water swim. These are actually among the most popular events in Masters, and they are so popular because they are actually so much fun to swim.

There are some practical guidelines for picking and swimming an event to ensure a good experience:

Choose a distance with which you will be comfortable. What distance can you see yourself swimming continuously, pushing the pace a bit but still being confident—500 yards or a mile?

It is common to start in the water in longer freestyle events. This eliminates the dive from the starting block, and you can wear goggles without worrying that they will come off during the dive. (Be sure to check with the starter before you get in the water.)

You can practice "pace swimming" for a longer event. Developing a sense of pace will give you a lot of confidence, for your body will know the feel of the speed it should go in the event. For example, if you enter the 500 freestyle, practice doing five swims of 100 yards each, keeping a constant pace with 15-30 seconds of rest between each swim; if you can comfortably hold a 1:45 pace for 100 yards, aim to do 5 x 100 yard swims, completing each one in 1:45, starting each one every 2 minutes or 2 minute and 15 seconds.

Avoid the major distance disaster—going out too fast at the start and having the "piano land on your back" later in the event. Doing pace work in training helps avoid this. Another good idea is to use the first 100 yards of the event as a warm-up. Stretch out, settle in, then pick up the pace later if you want.

The bottom line is, not everyone at a swim meet is there for the same reason. As a fitness swimmer, there are Masters events that fit with how you swim, and can make your total swimming experience more enjoyable. There may be Masters open-water events in your area, and these are tailor made for fitness swimmers. If not, look for a 500, 1000, or 1650 yard pool event. Either way, talk other swimming friends into going along, and take the plunge! ☺

*Suzanne Rague is Treasurer for the Oregon LMSC, past recipient of the Ransom Arthur Award, and a long-time fitness and competitive swimmer. This comes from the USMS website.*



## RECORDS SET AT OCEAN COUNTY MEET

The following new NJ LMSC records were set at the Unofficial Team Championship meet at the Ocean County YMCA on March 27, 2004.

### WOMEN

19-24

**Maggie Singler**  
50 Fly 28.57

40-44

**Jennifer Portman**  
50 Free 26.29  
100 Free 57.09  
100 Fly 1:03.85

**Rebecca Kalibat**

200 Free 2:04.38  
500 Free 5:28.05  
1000 Free 11:15.51

55-59

**Arlene DePolo**  
100 IM 1:36.44

### MEN

45-49

**Mike Kriley**  
50 Free 23.73

**Allan Bell**

100 Free 53.90

50-54

**Tom Geiman**  
50 Free 23.41

50 Fly 26.10

**Donald Asay**

500 Free 5:48.04  
1000 Free 11:50.05

65-69

**Jerry Katz**  
50 Free 27.50  
50 Fly 32.47

75-79

**Robert Stricker**  
200 Free 3:09.86  
500 Free 8:38.81  
1000 Free 17:47.03

85-89

**Austin Newman**  
500 Free 9:59.02  
1000 Free 20:28.20

## RECORD FALLS AT THE SPRING FLING

The following new NJ LMSC record was set at the SCY Spring Fling on March 21, 2004.


### WOMEN:

40-44


**Rebecca Kalibat**  
200 IM 2:16.40



## LAST CLINIC IN SPRING SERIES

Coach Ed Nessel and Rutgers University will offer one more clinic this spring so don't miss it! The clinic will include classroom discussion, in-pool instruction and a video session. This clinic is on Saturday, May 1, and will focus on "Power Swimming, sprint swimming, science of swimming and the physiology of aging. This cost is \$30 and the clinic runs from 11 am -5 pm. For more information, please contact Ed Nessel at ednessel@aol.com 

## NEW MASTERS SWIMMING PROGRAM AT PRINCETON

Coach Darek Hahn (DHahn@princeton-lightwave.com) has just started a new Masters swimming program at Princeton Fitness and Wellness. Workouts will be on Monday and Wednesday from 7-8:30 pm and Saturdays from 7:30-9 am. The program will be free to Princeton Fitness & Wellness members and \$40 per month or \$110 a quarter for non-members. 

## PYRAMID WORKOUT

By Kerry O'Brien

### WARM UP:

S-300, K-200, P-200

### SET I:

25 kick  
50 kick/drill  
75 kick/drill/swim  
100 swim EZ  
75 swim moderate  
50 swim fast  
25 swim sprint

### SET II:

Pyramid 300s, 5 X 300

### DISTANCE OPTION:

Descend 1st, 2nd, and 3rd 300 at moderate interval. 4th 300 is broken 10 seconds at the 150. Make it faster than #3, but must be even split so that both 150s are the same speed. 5th 300 is broken 10 seconds at each 100. Make it faster than #4, but all three 100s must be the same speed.

### MID-DISTANCE OPTION:

1st, 2nd and 3rd 300 do as (150 + 3 X 50 with 10 seconds rest). Descend the 150s; maintain a 200 race pace on the 50s. 150s can be freestyle while the pace 50s non-free if you choose. 4th 300 is recovery. 5th 300 is 200 for time + 100 EZ

### SPRINT OPTION:

1st 300- sprint the first 25 of each 100.  
2nd 300- sprint the first 25 of each 75.  
3rd 300- sprint the first 25 or each 50.  
4th 300- sprint the first 25 or each 75.  
5th 300- sprint the first 25 of each 100.

### SET III:

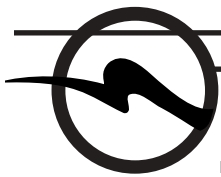
Pull 4 X 125 with 20 seconds rest. 1st 75- descend stroke count per 25. Last 50- build up speed at that stroke count per 25.

### SET IV:

5 X 100 all kick (fast) to all swim (easy)  
1. 100 all kick.  
2. 75 kick/25 swim. 3. 50 kick/50 swim.  
4. 25 kick/75 swim. 5. 100 all swim

### TOTAL: 3,600

—Taken from March/April '03 issue of Swim Arizona. Kerry O'Brien is the head coach of Walnut Creek Masters. During his time there, they have won over 30 national championships. In addition to being the USMS Coach of the Year in 1987, Kerry led the Arizona Mentor Coach and Swimmer Clinic at Phoenix Swim Club in January of 2003.



## “YOU LEAVE ME BREATHLESS”

By Edward H. Nessel, R.Ph. MS, MPH, PharmD.

### OVERVIEW

Aside from the 1950's old rock-'n-roll tune by Jerry Lee Lewis, these words should be very familiar and ring true to every swimmer who honestly trains to go faster...

Rapid vigorous movement whether sudden or prepared is expected to bring about the body's compensating mechanisms which include the most visible and obvious: increased depth and rapidity of breathing. There have been many scientific experiments whereby normal athletes at sea-level were given pure oxygen to inhale before and after intense exercise in assumption of either delaying oxygen debt or enhancing recovery. Neither the arterial blood content of oxygen was increased nor the recovery time diminished. Since this proves that the body can not store or accumulate oxygen to any great extent, the superficial interpretation of this intense breathing response would be that it is simply the body's way of bringing back its supply of usable oxygen. But this is only partially correct.

I submit that rather than simply developing an oxygen debt or deficit as a consequence of intense body movement, the build up of carbon dioxide (CO<sub>2</sub>) from increased metabolism is the main cause of the sometimes nearly paralyzing symptoms of breathlessness.

Even a benign situation like being tired (or bored) can cause the body to work at compensation by causing a yawning sequence. This happens more to cause the blow off (forced exhalation) of increased CO<sub>2</sub> rather than to inhale more oxygen.

One gets drowsy in a car (and begins to yawn) with several people as passengers and closed windows and vents more so because of the build up of CO<sub>2</sub> in the air than any measured decrease in oxygen content. And this manifestation would be even more apparent and occur more quickly in aerobically conditioned athletes because of their ability to extract more oxygen from the ambient air per unit time and leave more CO<sub>2</sub> to build up.

I have also noticed on many occasions that exposure to cold would bring on the yawning reflex; here, due to the increased metabolism (shivering, etc) necessary to raise body temperature, more CO<sub>2</sub> was produced which then needed to be blown off forcefully.

This article will hopefully relate in part what happens to the body when it is asked to endure the vigorous activity of swimming fast. Depending upon the duration, intensity, and specific type of movement through water, and, of course, the physical condition and athletic aptitude of the participant, breathlessness is the endpoint for which to train.

This is not an easy thing to ask of an athlete, especially on a constant basis. It is one thing to become short of breath during vigorous land-based exercise...the body usually responds in its natural way of rapid respiration, in-and-out, without much thought given to controlling this process in any way other than the desire to recover as quickly as possible. But do the same in water, and we see a whole other story. No matter how athletic the participant, if one can not control the breathing part of swimming for as long as the race lasts, the whole technical aspect of the stroke usually breaks down, and movement through water becomes, at first, less efficient, then downright counter-productive. AND, this negativity is magnified even more with the fact that as one moves faster through the water, the liquid medium holds the swimmer back with resistance that is either squared (under the surface) or cubed (at the surface). A land-based athlete with any logic might eventually analyze this and say: "why bother?" An experienced swimmer, on the other hand, comes to realize that in the final analysis, it is breath control that dictates speed throughout the race. Mis-pace the race by taking it out too fast, or make the mistake of holding the breath too much in the beginning, and all too often the back end of the swim becomes more of a struggle than the swimmer bargained for...all because of the sensation that oxygen is in very short supply.

There are many complicated physiological processes that occur in cascade fashion when body movement becomes more demanding than staying in one's "comfort zone." There are dictums and theories about oxygen deficit versus oxygen debt; about recovery oxygen uptake or excess post-exercise oxygen consumption (EPOC). I will discuss what I feel is the prime motivator to breathe, why we do this, and what happens if we don't.

### SOME PHYSIOLOGY OF THE RESPIRATORY RESPONSE TO EXERCISE

Metabolically, to move fast in any fashion (for more than just a few seconds)

creates biochemical demands that must be "caught up to" and dealt with by the body. The forced deep exhalations automatically proceeding right after vigorous movement is one way the body tries to bring back its overall pre-activity condition (homeostasis). Carbon Dioxide (CO<sub>2</sub>) is one of the end products of metabolism; it can not be prevented from forming, but it can be prevented or at least delayed from building up. If there is muscular movement, CO<sub>2</sub> is produced. If CO<sub>2</sub> is produced in low enough amounts (light to moderate movement) it can be easily carried away by circulating blood through the muscles; there will be no buildup and no sensation to want to breathe vigorously. The typical breathing mechanism will allow for this transported CO<sub>2</sub> to be adequately blown off at the lungs. The better the condition of the athlete, the more readily this process takes place.

Eventually, the more CO<sub>2</sub> produced, however, the greater the responding respiration becomes. Any time CO<sub>2</sub> production rises to a greater extent than can be handled by the rate and depth of breathing, blood will leave the lungs with some residual CO<sub>2</sub> in it to be re-circulated through the heart and then on to the arterial blood supply and to the body's various tissues and organ systems. If there is more CO<sub>2</sub> in place in the circulating blood, there has to be less room for oxygen (O<sub>2</sub>) to be circulated. One of the typical end-result physical markers I look for in this case is seeing a face with blue lips (cyanosis) at the completion of an anaerobic (lack of oxygen) hard swim.

Since CO<sub>2</sub> is being produced throughout the body with vigorous activity, adding more to the immediate tissue environment from the circulating blood only deepens its negative effects. One such effect is actually a rescue mechanism of sorts: there are CO<sub>2</sub>-sensors in the arterial blood supply which, when stimulated, produce the sensation of "air hunger." THIS, I feel, is the primary stimulus that causes the breathing center of the brain to want to engage in forced respiration, not what might be construed as a relative lack of oxygen.

With rapid inhalation and exhalation of ambient air, the oxygen exchange is really not that dramatic. As an example of quick inhalation-exhalation oxygen exchange, I submit the scenario of giving CPR to one who needs resuscitation. The ambient air contains 21% oxygen on average;

forced air from a rescuer into the victim only contains about 16% oxygen; this shows that the body removes only about 5% of oxygen from quickly-inspired air. In addition, even with well-trained athletes, it takes time for all the respiratory trained mechanisms to kick in...sometimes as much as three (3) minutes, so maximum oxygen consumption and oxygen exchange doesn't really come into play as quickly as the build-up of CO<sub>2</sub>.

#### PHYSIOLOGIC EFFECTS FROM EXPOSURE TO ALTERED OXYGEN AMBIENT AIR

To put this presentation in proper perspective, I must mention the importance of the amount of available oxygen in the ambient air where and when vigorous movement is initiated. Right from the start, the amount of oxygen in the air and its corresponding pressures do have an effect on athletic performance. Though this discussion is about work at sea-level, I want to show the powerful influence of available oxygen at different altitudes...

If one trains at sea-level where the relative oxygen content of the ambient air is 21%, and the barometric pressure is 760 mmHg (mercury), and the atmospheric oxygen pressure is 160mm Hg, the alveolar (air sacks in the lungs) oxygen pressure averages about 110 mmHg, and the arterial blood oxygen pressure rises to 96 mmHg. The body gets used to this constant oxygen supply at this pressure while the adaptive enzymes become "trained" to extract what oxygen they have to work with from moment to moment.

Take the altitude up to 3000 feet and we see the barometric pressure drop to 687 mmHg, the atmospheric oxygen pressure drop to 142 mmHg, the alveolar oxygen pressure drop to 94 mmHg and finally the arterial blood oxygen pressure drop to 83 mm Hg...an almost 14% drop in blood oxygen content from sea-level.

Go to a mile high and the parameters drop to 631 mmHg barometric pressure, 132 mmHg atmospheric oxygen pressure, 85 mmHg alveolar oxygen pressure, and 75 mm Hg arterial blood oxygen pressure...a 22% drop in blood oxygen content from sea-level

Go to 8000 feet high and the important parameters read thus: alveolar oxygen pressure drops to 69 mmHg and the arterial blood oxygen pressure falls to 63 mmHg...an almost 35% drop in blood content of oxygen from sea-level to 8000 feet.

These physiologic numbers (lung and blood oxygen contents) are reduced by 10-15 mmHg in normal older athletes.

(No rocket scientist needed to see that if a poorly adapted athlete pushes hard at altitude, the reduced oxygen supply will manifest the sensation of breathlessness sooner and with more intensity; any CO<sub>2</sub> buildup will happen sooner into the exercise bout and will produce a prolonged effect of breathing distress. What usually presents is what is called "dragon-breathing." This is a type of involuntary adaptive reflex whereby the distressed athlete gasps for air with facial grimaces and neck muscle contractions.)

You can see from the above listings that absolute available oxygen is extremely important to the body's ability to extract it for metabolic use; have it (oxygen) compromised in content, and the ability to utilize it is diminished immediately. Here the breathing mechanism and corresponding oxygen metabolism are stressed such that not only is the probability of CO<sub>2</sub>-build up a certainty but any help from available oxygen to try and offset this will be hard to obtain. A physical manifestation that sometimes presents when respiration is compromised and the athlete is in distress is called "dragon-breathing." Mostly seen with asthmatics but not restricted to same, "dragon-breathing" immediately signifies intensely-labored respiration. Once started the body only attends to recovery from this state at the expense of all other movement.

Holding one's breath during training provides, in my opinion, only one benefit to the swimmer. It helps somewhat in the tolerance of CO<sub>2</sub> build-up...something that could prove decisive with streamlining off the walls and into finishes. This having been stated, I am otherwise against breath-holding while swim racing most distances.

#### BREATHING PATTERNS WHILE SWIM RACING

There are two types of distress that the body must be trained to withstand: physiological and psychological. Correct physiologic adaptations are hoped for with appropriate training sets throughout the main racing season. But it is the PERCEIVED bodily response and adaptation to the swim training that will prove to be most important in producing fast swims. How you practice is how you race!

Cecil Colwin wrote an informative article on several aspects of breathing when

swimming the four racing strokes (American Swimming, 2003, issue 5). I agree with his presentation that the inhalation aspect of the breathing cycle is noticeably shorter than the exhalation aspect. But I disagree with Mr. Colwin that the "used air" should not be forced out with any great effort otherwise breathlessness will ensue more quickly. Of course the breathing and movement through each stroke cycle should be rhythmic, but this comes with practice and experience. Learning to pace an event and control the breathing cycle is just as important as knowing how to swim the required stroke...maybe even more so. Many a good swimmer has taken a race out too hard and wished he hadn't; some are able to "feel" the mistake quickly and rely on their reserve of aerobic and anaerobic conditioning to hopefully salvage the effort, but most usually do irreparable damage physiologically (breathing-wise) and suffer the consequences.

I've seen this all too often with enthusiastic and energetic age-groupers. They get caught up in the immediate moment of competition and forget the whole concept of breath control for the whole race. The 100 yard/meter freestyle is a strong example.

Usually thought of as short enough to allow breath-holding as in the 50 free, what proves out is the fact that doubling the distance (50 to 100) in water at full blast requires almost four (4) times the energy (actual and perceived) since stressful metabolic alterations are occurring in an accelerated rate so the back half of the race is happening in an already "unfriendly" physiologic environment.

I suggest that the only breath-holding event be the 50 freestyle, and even here, some exhalations of CO<sub>2</sub> need to occur to assure a breath-holding strong finish. The 100 free should have the swimmer breathe every cycle going into the last 25 yards/meters where and when the athlete's ability to breath-hold during building discomfort will allow the quickest, strongest finish possible. Needless to say, this type of breath control needs to be practiced over and over for all freestyle events over a 50 so it becomes automatic during the "combat of racing."

I am against "double breathing" in backstroke only because of the negative influence on the smoothness of the stroke cycle; some gravitate to this breathing cycle because the head is out of the water and no coordination of head

## QUICK-TWITCH HEAVEN *By Dan Thompson*

Are you a born sprinter? Do you have more in common with Carl Lewis than Janet Evans? Do you know how it is to have explosive overdrive but to hang on for dear life in any race beyond a 50? If you answer in the affirmative to the above questions, then Masters swimming is a fast-twitch package heaven-sent for you. Just think of it... 50s in every stroke, the 100 IM, and a short-course season spanning September through May!

The prospects are enticing, but do you lack the time and inclination for the back-and-forth lap swimming of workouts past? No problem. If Mr. Lewis can be a speeding locomotive without 10K training, then you needn't train for the Channel to be in top sprint shape for a 50 yard blast. Four sessions per week of focused sprint work will do the job. Here are the ingredients:

### FLEXIBILITY

The time-constrained sprinter may view stretching as a luxury training item. But quick-twitch muscles are less fish-like in their elasticity than those of your slow-burn compatriots. Take ten minutes to stretch out before every practice.

### STRENGTH

Pump iron if you really must, but remember that you already possess natural fast-twitch power. By using stretch cords, you can harness that power in ten minutes per day. Do four sets of 20 repetitions, using heavy cords and a butterfly pull-pattern. Stretch back far enough to get a major triceps muscle-burn.

### WARM-UP

This is but preparation for the speed set that follows. Go far enough that you are

loosened and have a feel for the water. Use stroke drills, and introduce speed play by pace-building every third 25.

### SPRINT SET

Believe it or not, you can train to race 50s by doing sprints of half that distance in practice. Apart from warm-up and warm-down, this need be your only set. It is staggeringly simple: 8 X 25 kick, a full recovery, and then 16 X 25 swim. The key is to use long rest intervals, with a work-to-rest ratio of at least 1:4. Otherwise, lactate build-up will hamper your explosiveness.

Pure sprinters need a heavy kick, so work the kick set. Learn to stay aggressively focused. You can be sociable some other time. If your stroke falls apart, just stop, warm down, and go home. You're into power swimming, not punishment.

### SECRET WEAPON

Weeks have gone by and you are feeling strong enough to handle a greater training overload. Now is the time to bring out the magic potion, if there ever was one for the Masters sprinter. Instead of adding yardage to the program, simply keep the yardage where it is but add resistance! Adding yardage will train your speed-endurance, but what you're after is raw speed itself.

You can get that raw speed by training hard against drag forces greater than those ever encountered in competition. Track sprinters do it by sprinting in sand dunes and by using parachutes. We do it by wearing sleeveless sweat shirts and by using hand paddles. On our kick sets, we do the same by holding the kickboard like a barge, underwater with the flat surface forward.

Resistance efforts like this one are a genuine form of weight work for the sprinter, and should be carefully added to every other workout. They will keep your training time short and will add an overload that makes ordinary sprinting seem easy by comparison. On top of that, they will satisfy the hunger of the primal sprint beast within your soul.

### TAPER

On this type of program, you are always ready to rumble. The danger is in over-resting. Ten days out from the big meet, drop the cords and resistance work. Taper back the number of sprint repetitions, but maintain your intensity and speed. Five days out, switch from 25s to 12 1/2s.

### CAVEAT

The exuberance that sprinters are known for is a gift that sometimes works against them. It goes without saying that any training program, especially this one, should be entered cautiously and progressively. Also, there is no suggestion here that you give up fitness conditioning, which we all know is good for your health. If time allows and you are looking for speed, you can graft this regimen into your endurance program. ☹

*Dan Thompson swam IM for Harvard in the late 1960s. He has coached a sprint-oriented Masters team, the Texas Sprinter-Beast. Last year, he gave up his Austin medical practice to become Head Age-Group Coach at Texas Aquatics. Dan has used minimum yardage training with great success. At age 44, he set a USMS national record of 23.63 in the 50 yard butterfly. This piece was taken from the March/April '04 Swim Arizona newsletter.*

## "YOU LEAVE ME BREATHLESS" *Continued from page 4*

movement with breathing is absolutely necessary. But the stroke should be trained with the same breath control as freestyle: of inhalation on one arm, exhalation on the other arm.

The correct breaststroke rhythm dictates one breath per cycle, and it is here that the inhalation is much shorter than the exhalation if one is to maximize the efficiency of the underwater glide...good chance to blow out mounting CO<sub>2</sub>.

The butterfly, consuming the most energy per unit time of swimming, requires regular inhalation/exhalation. World records have now been swum with breathing every cycle... just as much for controlling the breath and keeping the sense

of breathlessness at bay longer into the race as for maintaining the rhythm of the stroke.

Everyone slows down towards the end of a hard race. But with proper breath control, I prefer to have my swimmers slow down less than their competition. Hopefully this will mean a fast swim. Breath control...it keeps you in it to win it.



## THE ODDS OF HITTING A TARGET GO UP DRAMATICALLY WHEN YOU AIM AT IT.

—MAL PANCOAST

Continued from page 1

### FLASH! FINA AWARDS 2006 MASTERS WORLD CHAMPIONSHIPS TO US MASTERS SWIMMING

"Another dividend will be the opportunity to work together with our sister disciplines," he added. Great Britain and Egypt also submitted bids to host the 2006 World Championships.

"Winning this bid," Dr. Miller said, "is a tribute to the leadership of Pacific Masters and their organizing skills.

"We were pretty sure there would be competing bids," he elaborated. "When FINA decided to allow the three countries that were bidding to make presentations, we sent Michael (Moore, head of the PMS organizing committee) to Dubai. He put together a Power-Points presentation that just wowed the FINA members.

"Michael has been awesome in his leadership role," Dr. Miller added. This marks only the second time the United States will have hosted the event, the world's largest competitive aquatic meet. The last time was in 1992, when the meet was held in Indianapolis. The last time the meet was held in North America was in 1994, when Montreal played host. ☺

## AGING UP

This April four swimmers move up to a new age group. Happy birthday to:

Edward Eyring	55
Peter Gruntfest	55
Scott Yeomans	40
Emilie Hottat	20

### CORRECTION TO AGING UP

Last month we listed Mike Waldron as aging up to 40. Most people wouldn't call me on this mistake but Mike wants it known that he's aged up to 45. What honesty! ☺

## PLACES TO SWIM

Please let me know if changes need to be made at any time. I rely on you to keep this list updated. You can contact me (Linda Brown-Kuhn) at 908/479-1038 or lbk@sprintmail.com. -Thanks.

### COACHED WORKOUTS

**Berkeley Aquatics** Contact: Coach Eric Fucito at the Berkeley Aquatic Club, Berkeley Heights; 908/464-0574 or njmasters@msn.com. Workouts: M 8:30-9:30pm, W 8-9:15pm, F 8-9pm, Sun. 8:15-9:45am

**Bridgewater Pool/Somerset Valley YMCA** Contact: Don Fink at donfink@comcast.net, workouts T at 8pm & H at 5:30am.

**Hunterdon County YMCA at Deerpath** Contact: Nancy Shapiro at the Y; 908/782-1030. Practice is W 8:30-9:45pm. Sandy Carosi holds workouts T, H 9:15-10am. Contact her at 908/236-0086 or jcarosi@aol.com.

**Lakeland Hills Masters Team** Contact Pam Banks at swimbanks@earthlink.com or www.lhymasters.tripod.com/lhym.html

**Madison YMCA** Contact: Jon Seigel; 973/822-YMCA, ext. 228 or marinersSwimming@aol.com or www.marinersswimming.com. Workouts are M & W 8:20-9:30pm.

**Monmouth Swim Hawks** Monmouth University, West Long Branch Workouts are T & F mornings from 7am-8am. Call Murray Simon at 732/229-7623.

**Morris Center YMCA** Contact: Jack Lawson at 79 Horsehill Rd., Cedar Knolls 07927; 973/267-0704.

**Ocean County YMCA Masters** Contact: John Morrison; 732/341-YMCA.

**Peddie Aquatics Association** Contact: Michelle Wriede, email at mwriede@peddie.org or call 609/529-4011. Practices are M-H 8-9:30pm, F 5:45-8am, 8-9:30pm, Sun. 4-6pm.

**Ridgewood Y** Contact Garret Orr; gso@entrepreneur-equity.com or 201/934-4222. Workouts are M & F 8:30-9:30pm.

**Rutgers University** Contact Ed Nessel; 908/561-5339 or Alex Antoniou; 732/445-0457.

Workouts are held at the Sonny Werblin Rec Center pool. Workouts: M-F noon-2pm, Sunday 5:30-7pm, M, T, H, F 6-7am, T & H 8-10pm, F 7:30-9pm

**Stevens Sting Rays** Contact: Cheryl Lee 201/216-8039. Workouts are M, W, F 7:30-9 pm; T & H 6-7:30 am and 8-9 pm; Sun 10-12.

**The Atlantic Club** Contact: Stephanie Crofto; 732/223-2100, ext. 318.

**Union Boys and Girls Club** Ron Karnaugh at RonKarnaugh@aol.com or call 973/868-9922.

The Club is located at 1050 Jeanette Ave., Union, NJ 07083 908/687-BOYS ext. 24; Directions: www.bgcuaquatics.org; Updates: www.SwimMD.com

**West Morris Area YMCA** Contact: Bob Hopkins at 973/729-3686.

**Westfield Masters** Contact: Bill McMeeekan at 220 Clark St., Westfield; 908/233-2700.

Workouts: M, F 7:30-9pm, W 8:30-10pm.

**Wycoff YMCA Masters** Contact: Doug or Ray at the Y; 201/891-2081.

Workouts are T & H 7:30-8:30pm and Sat., 7:30-8:30am. During the winter call before Tues. workouts, as time june/july change due to kid's meets.

### NON-COACHED WORKOUTS

**Hamilton Area YMCA** Contact: Nancy Shapiro; 609/585-1014.

Workouts: M 8:30-9:45pm and Sun., 11am-12:30pm.

**Newark YMCA** Contact: Joy Henderson; 973/624-8900, ext. 6811.

Workouts: M-F, 6-9am, 12-2pm, 6-7:30pm, Sat. 1-2pm.

**Montclair Masters** Contact: Omar Cruz, Montclair YMCA, 25 Pine Street, Montclair, NJ 07043;

973/744-3400x109. Workouts held M, W 6-7 pm, F 6:30-7:30 pm.

**Princeton Area Masters** Contact Paul Mucciarone, evenings at 609/655-0997 or at pfmooch@hotmail.com or contact Princeton Recreation Dept.; 609/921-9480 and ask for Katie Herlihy. Workouts are M-F, 5-6:45 am at the Princeton DeNunzio Pool.

**Red Bank YMCA/Deal JCC** Contact: Doug Rice; 908/741-2503.

**Sussex County Masters** Contact: Bob Hopkins; 973/729-3686.

**Metuchen/Edison YMCA** Contact: Jay Koperwhats at 908/548-2044.

**Western Monmouth YMCA** Contact Richard Wallace; 732/446-4589 (H). 973/482-6400, X 2256 (W), swimphil@optonline.net

**Whippany Waves Masters** Contact: Ben Gilbert; 201/428-9300

NJ LMSC  
451 Sweet Hollow Road  
Bloomsbury, NJ 08804

ADDRESS:



## MEET CALENDAR

### MEETS IN NEW JERSEY

**JUNE 25**

**1 MILE BAY SWIM, KENNEDY PARK, SOMERS POINT**, 6:30 pm start. Contact Karen Pratz, Ocean City Aquatic & Fitness Center; 609/398-6900.

**JUNE 27**

**6TH ANNUAL PLUNGE FOR THE PATIENTS SWIM (1 OR 3 MILE), WILDWOOD**. Contact Vicki Ander, 410/502-5395, andervi@jhmi.edu

**JULY 3**

**1.3 MILE OR A 5K BRIDGE TO BRIDGE RACE**. Contact Sid & Kara Cassidy, 311 Montpelier Ave., Egg Harbor Township, NJ 08234; 609/653-0939, sacisidy@comcast.net. 4:30 and 6 pm start.

**JULY 17**

**1 MILE OCEAN SWIM, 7TH ANNUAL SWIM FOR THE DOLPHINS, WILDWOOD CREST**. Contact Dave Hirsch; 609/465-5590 or contact L & M Computer Sports, 89 Park Dr., Berlin, NJ 08009; www.lmsports.com

**JULY 24**

**1 MILE OCEAN SWIM, OCEAN CITY (34TH ST.)**. Contact Darren Hickman; 609/926-9191, darrenhickman@hotmail.com or go to www.lmsports.com

### MEETS OUTSIDE OF NEW JERSEY

**APRIL 18**

**SCY APRIL SHOWERS MEET, NASSAU COUNTY AQUATIC CENTER, EAST MEADOW, LONG ISLAND.**

**MAY 2**

**1000/1650 MARYLAND MASTERS, UMBC, CATONSVILLE, MD.** Go to <http://maryland.usms.org>

**JUNE 13**

**4.4 MILE CHESAPEAKE BAY SWIM**. Race was full as of 2/2/03. Call 856/468-0010 or [www.lin-mark.com](http://www.lin-mark.com)

**JUNE 13**

**1 MILE BAY CHALLENGE SWIM, RUN AT FINISH OF 4.4 MILE CHESAPEAKE BAY SWIM**. Go to [www.lin-mark.com](http://www.lin-mark.com)

**JUNE 26**

**MADISON MILE, MADISON, CT**. Contact Dave Parcels, 17 Yankee Glen Drive, Madison, CT 06443; 203/606-4529, dave@force5sports.com.

**JUNE 27**

**1 AND 2 MILE LEHIGH RIVER SWIM, ALLENTOWN, PA**. Contact James Platt, PO Box 3304, Allentown, PA 18106; jhp35@hotmail.com or Mike Seip, seip@enter.net

**JULY 3**

**28.5 MILE SWIM AROUND MANHATTAN ISLAND, NYC**. [www.nycswim.org](http://www.nycswim.org)

**JULY 17**

**0.5 MILE COVE TO COVE SWIM, NEW YORK, NY**. [www.nycswim.org](http://www.nycswim.org)

**JULY 17**

**2.4 MILE RACE FOR THE RIVER (HUDSON RIVER SWIM), NYC. WORLD FINANCIAL CENTER TO CHELSEA PIERS**. [www.nycswim.org](http://www.nycswim.org)

**JULY 31**

**METROPOLITAN 1 MILE OPEN WATER SWIM CHAMPIONSHIP, POINT LOOKOUT, LI**. Go to [www.nycswim.org](http://www.nycswim.org)

**AUGUST 1**

**1 MILE PARK TO PARK SWIM, NEW YORK CITY**. [www.nycswim.org](http://www.nycswim.org)

**AUGUST 7**

**17TH ANNUAL 25K SWIM ACROSS THE SOUND** (from Port Jefferson, NY to Bridgeport, CT). Proceeds help cancer patients and their families. Entries are due by 5/31. Contact Dave Parcels at dave@force5sports.com or at 203-606-4529 or go to [www.swimacrossthesound.org](http://www.swimacrossthesound.org).

### CHAMPIONSHIPS

**APRIL 15-18**

**YMCA NATIONALS, FORT LAUDERDALE, FL**. Go to <http://www.ymcaswimminganddiving.org/2004Masters.htm>

**APRIL 22-25**

**SC NATIONALS --- INDIANA UNIVERSITY, INDIANAPOLIS, IN**. Contact Mel Goldstein; 317/253-8289 or Goldstein@mindspring.com.

**JUNE 2-13**

**WORLDS---RICCONE, ITALY**. [www.masters2004.it/italy](http://www.masters2004.it/italy), (39) 06362 000 469

**JUNE 27**

**USMS ONE MILE OPEN WATER CHAMPIONSHIP, WILDWOOD, NJ**. Contact Vicki Anders at 410/502-5395 or andervi@jhmi.edu. Go to [www.usms.org/longdist/ldnat04/mientry.pdf](http://www.usms.org/longdist/ldnat04/mientry.pdf)

**AUGUST 12-15**

**LC NATIONALS ---- SAVANNAH, GA**. Contact Scott Rabalais at [Scottrabalais@compuserv](mailto:Scottrabalais@compuserv)