



Across The Lanes

THE CHAIRMAN'S LANE by Fritz Lehman

I swam in the Frank Clark Open this March. I'd like everyone that wasn't there, and that's most everyone, to know that it was really a lot of fun. I hope we can convince the folks in Greensboro to continue sponsoring the meet. It's the perfect time of year, right between the Charlotte and Raleigh meets, and a location that is convenient to many of us. Next year, one way or another we are going to encourage 100 swimmers to enter and swim. Mark it on your calendar, we're all going to meet and enjoy the Frank Clark Open in 2003.

The April State Meet hosted a pretty good turnout of around 180 swimmers. There was fast swimming at all ages. Thanks to everyone who was there whether you swam, worked, or watched. We couldn't have pulled it off every year without you. If you missed it, there was an epic battle between old and young in the 200 backstroke. While the young guy may have had the faster time, at least the old guy didn't get disqualified. Sorry Todd, I couldn't resist. The results are posted on the web at <http://www.ncmasters.org/13202res.html>. Looks like we've got a new big dog in the state. Razvan Petcu started off the CSM 200 free relay in a 20.74. Some of his other swims weren't too shabby either. Check out the results.

We've have several swimmers whose season isn't quite over. Erik Crankshaw, Sandra Kremer, John Mangrum, Douglas McIntosh, and Ashley Murray are all entered in the USMS Short Course National Championships in Hawaii. By the time this Newsletter is published they will have gone and come home. Good luck, swim well and have some fun.

The summer season is on us and there are several things to look forward to other than swimming outdoors. RAM is hosting a one-day long course meet at the end of July. Check the Newsletter for complete meet information. This is the only in-state long course meet of the summer; so please give it your support. The XMEN are holding their Annual Open Water Swim on Saturday, August 24 at

Wrightsville Beach, NC. There's a 2-mile swim for us sprinters and a 5-mile Swim for the rest of you. We had a good time last year. It was a pretty day, we had a nice swim, and there was plenty of food after. What else could you want? If you aren't into competition then just come out for a training swim and make a weekend of it.

USMS Long Course Nationals are in Cleveland August 14-18. I've heard many Masters comment that they are going. The Social will be at the Rock and Roll hall of Fame and should be lots of fun. Here is a piece of trivia for you. The meet will be held at Cleveland State University pool where Joe Bottom and Gary Schatz were the first two men to break 20 seconds in the 50 free. It was at the NCAA championships in 1977. The pool is fast.

Read your *SWIM* magazine carefully this month. One of our own is a USMS All Star. An All Star is the swimmer with the most #1 national rankings in his/hers age group. Congratulations to Mr. Boyd Campbell! He's the All Star in Men's 90-94.

The USMS National Office has decided that the idea of offering workouts on the web is a good one. The idea is so good that they are paying three different groups to post weekly workouts. Go to <http://forums.usms.org/> and look for the "Workouts" Link. Michael Collins, Clay Evans and Bonnie Adair, and Mo Chambers provide the workouts. Biographies of the coaches are available on each of their sites. Thanks to our Jerry Clark who was ahead of his time when he arranged workouts for us on the North Carolina LMSC website.

THE REGISTRAR'S LANE by George Simon

Our LMSC registrations are slightly behind last year's. The LMSC goal was to register 800 swimmers during this year. As of May 1st, we have 607 registered swimmers, 13 fewer than last year. Our team and individual lists are posted (name and team affiliation only) on our website: <http://www.ncmasters.org/byname.html> and <http://www.ncmasters.org/byteam..>

THE SECRETARY'S LANE by Sally Newell

LMSC for NC Meeting 13 April 2002 Raleigh, NC

Present: Fritz Lehman, Pres.; George Simon, Registrar; Sally Newell, Secretary; Sue Haugh, Treasurer; Ceil Blackwell, Top Ten; Jim Enyart, WAM; Tom Atkinson, TMS; Andrew Richelson, TMS; Kirk Canterbury, MAC; Suzanne Coneys, MAC; Bernie White, CSM; Norm McCarty, SCMM; Beverly Amick, AWSM

George Simon presented his Registrar's report (See Page 1).

Fritz Lehman received a letter from USMS Secretary, Traci Grilli, notifying our LMSC that we are required to send her minutes from our Annual Meeting. Fritz made the motion that our Fall meeting would now be considered our Annual Meeting. Ceil Blackwell seconded this motion.

In an e-mail to Fritz, Clark Mitchell noted that he doesn't think his proposal offered at the Winter LMSC meeting was adequately explained. Instead of "a team may nominate only a single person from their team for the Inspirational Swimmer Award", Clarke's motion should read "for any award which you nominate an individual, a given club can only nominate one person". A vote was not taken as it was decided to wait till we have that problem. Fritz stated the Awards nominating process would remain as is. We can review it again in the future if we feel a club is misusing the process. Another item Clarke brought up is the possibility of a Rookie of the Year Award. Discussion followed as to the definition of "rookie". It was decided that after Mitch (Clarke) provides the criteria for this award, the suggestion would again be brought up for discussion.

Suzanne Coneys is working on the LMSC rule book and a hand book. She is organizing the LMSC Rule Book which will be distributed to each club/team. Suzanne also provided the attendees with proposals of the handbook's contents: information, news, recognition. Suzanne's preliminary proposal is to use a revised and reorganized format of the NCMasters website as our handbook.

Hy-Tek's *Meet Manager* software was then discussed. Fritz said it has been suggested that our State LMSC have an organizational license which would cost \$250 a year. The license would allow the software to be used at all state meets. Right now, our license does not permit us to do that. Fritz will review our license to ensure we are in compliance with the Hy-Tek license.

The NC delegation to the USMS Convention was discussed next. Our LMSC (based on size) currently has two voting delegates. The question is, do we pay for voting delegates and / or those who are on committees? After much discussion, Fritz proposed that we nominate whom we would like to represent us at the Convention by e-mail by April 20th.

Beverly Amick asked about scheduling meets so they would not be so close to Nationals. This was the case with this meet (NC State Championships) being within a week of Y Nationals. It turns out that RAM did not have a choice as to dates.

Kirk Canterbury said MAC is planning to host a meet but was indecisive as to this year or next. Fritz then brought up his desire to see the TMS Frank Clark Meet grow. A better job of publicizing the meet several months in advance may help. Perhaps incentives or fun relays would encourage more participation.

The meeting was then adjourned.



2003 NATIONAL SENIOR GAMES

The 2003 National Senior Games will be held in Hampton Roads, Virginia, May 27th thru June 9th, 2003. This year, 2002, is the qualifying year for the Games. So, if swimmers wish to participate in the 2003 National Games, they must qualify in their state Senior Games swim meet to enter the National Games. October 5th is the date of the NC Games Swimming event.

To qualify for the National Games, a swimmer must place in the state competition in the top two in his or her age group in an event. There are national qualifying standards that apply as well, but only time from the state competitions will apply. So, if a swimmer places third or lower in an event and swims faster than the time standard, then the event may be entered.

There are also bonus events provisions that can be explained to you by your state office (919-851-5456).

Also, you may be happy to note that the 100 IM and the 200 breast have been added to the events at the national meet and should be offered on the state level as well.

If you have any further questions, please contact your USMS liaison to the NSG, Scott Rabalais at vicepresident@usms.org.

NIBBLING THROUGH NEW ZEALAND

By Jerry Clark

Summertime, 2001. New Zealand. Such a great place to visit, and Christchurch is hosting the 9th FINA World Masters Championship meet next March. I wonder if...

Those were my thoughts last August when I first heard about the bi-annual World Masters Meet. Yep, I talked it over with my wife, and we decided to go. Lots of reading and planning ensued, followed by my buying a few more frequent traveler miles so we could fly business class for such a long trip. We decided to make this a lifetime vacation by staying long enough – 5 weeks exactly - to really get a feel for the country. We would leave Charlotte on March 16th, begin with 3 days in Sydney, Australia, and then fly to Christchurch to settle in before the meet started March 24th.

At first, Suzanne Robbins-Bonitz (Wilmington), Sally Newell (Greensboro) and Dick Webber (Hendersonville) were planning to go too. We had a relay team! Later Suzanne and Dick dropped out, but Dick Kitchell (Blowing Rock) decided to go. With only the three of us, we decided to investigate transferring temporarily to another club so we could swim on relay teams. After talking with several, we ended up joining Walnut Creek Masters because about nine people were going, and Sally and I knew their coach. Then with just a couple of weeks to go Sally had to drop out, so Dick and I ended up being the only NC Masters at the meet.

Starting in Sydney was great. One fun visit was to the venue of the 2000 Olympics. What a thrill to see all the buildings, the various athletic fields, the stadium, etc. Needless to say, a swim in the Olympic pool was accomplished. I also enjoyed swimming in an outdoor saltwater 50m pool almost underneath the famous bridge over the harbor. That harbor is huge, and a boat tour is the best way to grasp the enormous influences it has on the economy. I've no idea how many homes are on the shorelines, but it's a lot, for sure.

Then across the Tasman Sea to Christchurch. This British-like city is on the east coast of the South Island of New Zealand, about one-third the way down from the top of this island. Our wonderful hotel, The Park Royal, was in center city. The opening ceremony of the swim meet was held in an amphitheater in the park at the rear door of the hotel. Flags of multiple nations circled the area, and the swimmers had on warm-ups of their respective countries. The New Zealand Vice-President along with many local dignitaries welcomed us. Then followed a Maori (the tribe that originally settled on New Zealand's north island, and

which now represents about 15% of the population there) welcome to the swimmers, and the symbolic silver fern leaf was handed out to all of us. What a great start.

The meet seemed a little disorganized with a good bit of confusion during the first few days. Maybe it was because they didn't have me in the meet when I checked in on Wednesday prior the Sunday start day. Two hours were spent straightening out this error. The only event on the first day was the 800 free, and the women were swimming first. When I looked at the heat sheets that morning, my name wasn't listed. So I was off to the pool to find out why. After about an hour, I found out from a FINA official that many people had been left off the heat sheets. They were putting all of us (80 altogether) in heats following the completion of those that were scheduled. Even though we had to wait until the end of the day, we were all relieved.

Finding our results – there was no scoreboard - was a nightmare, as they were scattered about the building. Some sheets showed selected age groups, but other age groups were posted in different places in the building. Lots of grumbling resulted. On one day, heat sheets were posted for a breaststroke event early in the morning, then changed about two hours later. However, by mid-week things improved as the FINA officials were directing that the meet staff arrange events and results more promptly and efficiently.

Although the competition was between clubs, not countries, USMS helped pay the way for four US Masters coaches to attend. They recorded our splits, cheered us on each day, etc. Seating at the meet was scarce for the most part, and we only had a 4-lane 25m pool for warm-ups during the meet. The meet pool was 2m deep throughout, which was great. All 10 lanes of the pool were used throughout the meet, and dive-over starts were in effect every day.

The two distance events, the 400 and 800 free, were swum with two people per lane. Heat 1a would start, with that swimmer staying on his/her side of the lane throughout their swim. When those guys neared the far end, heat 1b would start. Timing was by hand for these events, and seeding was by time instead of age group. We never knew where we finished until the results were posted. Perhaps they didn't think about putting touch pads at the other end, which would have allowed simultaneous starting from opposite ends and electronic timing for all events. I believe 106 world records were set at the meet, an indication of how fast the water was. I expect a forthcoming issue of SWIM magazine will have a full report about this.

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A large pool in an adjacent room was used for the Masters diving competition, and later for the synchronized swimming and water polo events. It was fun watching the divers and also the syncho swimmers who began their competition on the next to last day of our meet. The polo studs started showing up on Sunday for their competition the following week.

Dick and I had the pleasure of being on the medley and free relay teams with Sally Joy (85) and Jae Howell (80) from Walnut Creek. We placed 6th and 5th in the 280 age group. They were inspiring to us, and we were proud to have the opportunity to swim with them.

Woody and I rented a car after the meet and drove all over both islands. The beauty of New Zealand is well known, but still surpassed our expectations. The scenery changed frequently, from rain forests to snowy glaciers. We had many adventures along the way, and each day we wondered what new was coming up around the next corner.

I drove 3,500km, and we took many tourist buses, boats and walking trips to places so we could listen to the guide tell us about the area we were in. By the way, the nibbling part of the title of this article comes from the ever constant chocolate chip cookies that I nibbled on throughout the trip. All gas stations carried the brand I liked, so restocking was no problem. We agreed at trip's end that we wouldn't have done anything differently. The people were polite, friendly and helpful throughout the entire country. They made such a trip a real pleasure.

It took 13.5 hours to fly from Los Angeles to Sydney, and 10.5 hours to fly from Auckland back to Los Angeles. Both trips are overnight, so they aren't as hard as it might seem. If the opportunity arises, please take it and make sure to stay long enough to visit all the different areas of both islands. You'll be glad you did.

We heard that the 10th FINA World Masters Championship meet will be in Rome in 2003. Now that would be a fun trip to plan.

Jerry and Dick's Excellent Adventure
FINA World Masters Championships
Christchurch, New Zealand
March 23-30, 2002

Name / Age Group	Event / Place / Time
Richard Kitchell / 60-64	50M Fly / 5th / 32:56, 100M Fly / 3rd / 1:12:70, 200M Fly / 3rd / 2:58.48, 200M IM / 5th / 2:59.55 400M IM / 4th / 6:25.38
Jerry Clark / 65-69	400M Free / 1st / 5:26.18, 800M Free / 1st / 11:27.41, 50M Free / 3rd / 29.03, 100M Free / 3rd / 1:05.61, 200M Free / 2nd / 2:28.12,
Walnut Creek Masters "C" (with Clark and Kitchell) / 280-319	Mixed 200M Medley Relay / 6th / 3:24.54
Walnut Creek Masters "D" (with Kitchell and Clark) / 280-319	Mixed 200M Medley Relay / 5th / 3:08.49

2001 Relay All Americans
by Ceil Blackwell, Top Ten Chair for NC

The following swimmers achieved the rank of Relay All American for the year 2001. This honor is given to swimmers who were members of at least one relay team that placed 1st in the nation for their age group in either short course yards, short course meters or long course meters. These swimmers may order an All American Relay patch and certificate from USMS for \$5. For details on ordering, please contact Ceil Blackwell at ceilb@aol.com or (919) 787-8324.

Congratulations to all of these swimmers:
Scott Allen, Beverly Amick, Megan Andrews, Ceil Blackwell, Boyd Campbell, Todd Desorbo, Michelle Duval, Sharon Eckert, Patrick Govan, Harold Hoffman, Jeannie Mitchell, Sally Newell, Suzanne Robbins-Bonitz, Jim Scherbarth, Kim Stott, Dawn Stroupe, Adrienne Tello, Edison Watson, and Dick Webber.

Correction: 2001 Top Ten Long Course Meters

Mark Mendendorp (age 19-24) was ranked 5th in the nation in 100m fly, 6th in 50m fly, 7th in 200m fly and 10th in 200m IM for 2001 USMS Top Ten. His name was mistakenly omitted from the list printed in the Winter newsletter.

**United States Masters Swimming
2002 Short Course National Championships
April 14-17, 2002**

Five North Carolina Masters traveled to Hawaii to participate in the Championships and competed in the Small Teams Division. The NC team of two women finished thirty-third out of ninety-three women's teams. The NC team of three men finished fifty-first out of 107 men's teams. The efforts of the combined NC team garnered thirty-fifth out of 135 small division teams. Congratulations to this small but formidable team for representing NC so well.

Name / Age Group	Event / Place / Time
Erik Crankshaw / 30-34	100 Fr / 8th / 48.96, 200 Fr / 3rd / 1:45.76, 500 Fr / 3rd / 4:49.99, 100 IM / 4th / 55.36 200 IM / 4th / 1:59.56, 400 IM / 6th / 4:16.52
Sandra Kremer / 65-69	200 Fr / 7th / 3:10.46, 500 Fr / 4th / 8:15.93, 50 Br / 2nd / 46.87, 100 Br / 5th / 1:47.43 200 Br / 3rd / 3:47.76
John Mangrum / 35-39	100 IM / 22nd / 1:08.71, 100 Bk / 13th / 1:10.91
Douglas McIntosh / 40-44	50 Fr / 22nd / 23.66, 200 Fr / 19th / 2:05.55, 1000 Fr / 9th / 12:38.54, 50 Fly / 10th / 25.48
Ashley Murray / 25-29	50 Fr / 3rd / 24.94, 100 Fr / 2nd / 53.81, 50 Fly / 3rd / 27.54

North Carolina VS. USMS Membership

In case you are wondering how many other Masters there are in your age group in the United States, the following numbers are extracted from USMS Registry provided by Traci Grilli in the USMS Spring newsletter *STEAMLINES*..

NET Current Membership by Age (age as of 12/31/2001)

Distribution Across Age Groups

Registration Year 2001 thru Year-end

Members	Age Groups														Total
	19+	25+	30+	35+	40+	45+	50+	55+	60+	65+	70+	75+	80+	85+up	
LMSC															
NC	46	84	86	92	129	80	47	39	30	29	9	18	5	2	696
All LMSCs	2348	4347	5542	6114	6716	5483	3855	2314	1358	929	742	446	230	152	40576

Ages 19+ thru 40+ = 25,067 Women 45.3%

Ages 45+ up = 15,509 Men 54.7%

Ages 55+ up = 6,171

Ages 65+ up = 2,499

LMSC - NC Officers and Staff

Chairman Fritz Lehman, RAM 439 Pebble Creed Dr. Cary, NC 27511 (919) 481-9767 NCchairman@usms.org	Vice-Chairman Clarke (Mitch) Mitchell, PEAK Box 19768 Asheville, NC 28805 (828) 299-1410 NCswimrcem@juno.com	Past Chairman Jerry Clark, CSM 3107 Cloverfield Rd. Charlotte, NC 28211 (704) 374-1807 jerryclark@bellsouth.net	Secretary Sally Newell, RAM 1812 Swannanoa Drive Greensboro, NC 27410-3934 (336) 299-1456 Swimsally@aol.com	Treasurer Sue Haugh, RAM 9015 Lansdale Dr. Raleigh, NC 27613-4779 Haugh@sue@aol.com
Registrar / Webmaster George Simon, RAM 10229 Boxelder Drive Raleigh, NC 27613 (919) 846-2423 NCregistrar@usms.org	Top Ten Chairperson Ceil Blackwell, RAM 4305 John Rencher Wynd Raleigh, NC 27612 (919) 787-8324 ceilb@aol.com	Newsletter Editor Jim Enyart, WAM 2840 Marsh Point Rd Southport, NC 28461 (910) 253-3333 NCeditor@usms.org	Records Fritz Lehman, RAM 439 Pebble Creed Dr. Cary, NC 27511 (919) 481-9767 fritzelehman@nc.rr.com	

USMS SHORT COURSE METERS TOP TEN FOR 2001

by Ceil Blackwell, Top Ten Chair for NC

Congratulations to the North Carolina Masters who ranked in Top Ten in the nation for the 2001 short course meters season. Swimmers who placed first in the nation for their age group in at least one individual event are Boyd Campbell, Richard Kitchell, John Kortheuer and Sally Newell. If your name or an event is missing from the list below, please contact Ceil at (919) 787-8324, ceilb@aol.com or mail to 4305 John Rencher Wynd, Raleigh, NC 27612

Age Group	Swimmer	Place / Event
Women		
19-24	Julie Shepard	8th 50M Fly, 10th 50M Back
	Candice Johnson	6th 200M Back, 10th 100M Back
45-49	Beverly Amick	3rd 200M Fly, 3rd 50M Fly, 4th 100M Fly, 5th 400M Free, 6th 800M Free, 7th 200M Free, 8th 1500M Free, 9th 100M Free, 9th 200M Back, 10th 50M Back
	Debbie Wilson	7th 1500M Free
50-54	Sandra Cathey	2nd 400M IM, 4th 200M Fly, 6th 1500M Free, 9th 200M Breast, 10th 800M Free
	Jeannie Mitchell	2nd 50M Back, 2nd 100M Back, 3rd 200M Back, 5th 200M IM, 6th 100M IM, 8th 50M Free, 8th 50M Breast, 9th 400M Free
60-64	Ceil Blackwell	5th 100M IM, 5th 200M Back, 6th 50M Back, 7th 100M Back
	Sally Newell	1st 50M Breast , 4th 50M Back, 7th 50M Free
65-69	Sandra Kremer	6th 100M Breast, 7th 400M Free
	Suzanne Robbins-Bonitz	5th 50M Back, 7th 200M Back, 10th 100M Back
	Beverly Tucker	5th 200M Breast, 6th 200M IM, 9th 200M Back
Men		
19-24	Filippo Porco	6th 800M Free
35-39	Henry Stewart	7th 50M Free, 8th 50M FLY
40-44	Fritz Lehman	3rd 50M Back, 3rd 100M Back, 6th 200M IM
45-49	James Cottam	9th 400M Free
	Kevin Facchine	8th 800M Free, 9th 400M Free, 10th 1500M Free
60-64	Jerry Clark	2nd 50M Free, 2nd 200M Free, 3rd 100M Free, 3rd 400M Free, 3rd 800M Free
	Richard Kitchell	1st 200M Fly , 2nd 100M Fly
65-69	Clarke Mitchell	2nd 200M Back, 2nd 100M Fly, 3rd 50M Back, 3rd 100M Back, 5th 200M Free, 5th 50M Fly, 6th 100M Free, 9th 50M Breast, 9th 100M IM, 10th 50M Free
	John Kortheuer	1st 50M Breast , 1st 200M Breast , 2nd 100M Breast, 2nd 50M Fly, 2nd 100M IM, 8th 50M Free,
75-79	Dick Webber	6th 50M Free, 9th 50M Fly, 10th 100M IM
	Vester Boone	5th 200M IM, 5th 200M Breast, 6th 100M Breast, 9th 100M IM, 10th 400M IM
90-94	Boyd Campbell	1st 50M Free , 1st 100M Free , 1st 200M Free , 1st 400M Free , 1st 50M Back , 1st 100M Back
	Harold Hoffmann	2nd 50M Free
Relays		
100+	200M Free Relay	7th (Robin Robinson, A. Devaugh-Geiss, Julie Shepard, Candice Johnson)
	200M Medley Relay	4th (Candice Johnson, A. Devaugh-Geiss, Julie Shepard, Robin Robinson)

PERFORMANCE APTITUDES AND ATTITUDES

The Power Circle Power On – Power Off By Wayne Goldsmith – Moregold Sports

In the work phase, when the arms are applying force to the water, muscles are working hard to propel the body through the water. Generally the arms and hands are moving backwards - i.e. towards the end of the pool you are swimming away from. This feels like you are “pushing” the water backwards, but you are actually pulling your body forward. Ideally, the hand will scull in the same plane with the body moving forward past the hand.

In the recovery phase, arms are moving forward in the direction of the end of the pool you are swimming towards. In butterfly, backstroke and freestyle the arms are recovered out of the water and in breaststroke (for most swimmers) arms are recovered just under the surface.

Think about that word “recovery.” It means rest. It means restoration. It means take a break. It means turn the power off and prepare for the next stroke. Recovery is in many ways just as important as the work part of your stroke.

The Power Circle concept

The power circle explains how work and recovery interact to help you to swim fast.

When your arms are working hard turn the power on.
When your arms are recovering turn the power off.

When your arms are working, concentrate on great technique, high elbows, correct sculling and smooth hand actions. Then when you have finished working, turn the power off again during recovery.

This is particularly important when swimming butterfly.

Young swimmers often struggle to swim fly repeats longer than 25 meters. They mistakenly believe that the reason they struggle is due to a lack of strength or fitness. One of the main reasons long fly repeats seem tough is that swimmers don't turn off the power in recovery - they keep working their arms and tiring their muscles even when they are in recovery (i.e. when their arms are moving forward out of the water). In other words, their Power Circle is power on, power on, power on, power on... they are not recovering!

To ensure that the work phase in your stroke is effective, it is essential that you learn to stroke correctly and apply force to the water at key points in your stroke. Current thinking in swimming and underwater stroke power tells us that the best swimmers reach out long, catch the water, “hold the water” right to the end of the stroke, release and then recover. You can practice this by remembering the three power tips:

(When applying force in freestyle, breaststroke and butterfly)
- Fingers pointing to the bottom of the pool
- Elbow pointing to the side of the pool
- Back of the hand facing the direction you are going

In backstroke this is changed around:
- Fingers pointing to the side of the pool
- Elbow pointing to the bottom of the pool
- Back of your hand facing the direction you are going

Underwater film of the best swimmers in the world taken at the Olympics and World championships gives us the answers we need. Looking from front on (i.e. with the swimmers moving towards the camera) you can observe the back of the swimmers' hands when they are stroking and see the back of their hand all the way through their underwater pull.

By keeping their hand in that position (with the back of their hand facing the direction they are swimming), the swimmers are able to keep constant pressure on the water (i.e. feel the pressure of the water on their palms) and keep pushing the water backwards (pulling their bodies forward).

However, this constant pulling force is far more effective over the duration of the race if you also practice to rest and relax during your stroke recovery phase.

Power on when pulling, Power off when not. Turn the power on when you need to. Turn it off when you don't. It's a simple way of improving stroke through saving energy and relaxing your muscles when you don't need to use them.

Why does it work?

1. By resting your muscles during recovery your body uses less energy overall and using less energy means you have more left when it really counts - the last ten meters of your 100, the last 25 of your 200.
2. There are basically three different types of muscles in your body. The ones that work, the ones that rest and the ones that support the others. The aim in being efficient is to learn how to work the “workers,” rest the “resters” and allow the “supporters” to support without over stressing them. Recovery is all about being able to rest muscles when they are not working and not getting the “supporters” involved in the swimming action so they can keep doing their support job.
3. It is logical. Muscles help move your body through the water. They don't need to help you move through air! Why waste effort and energy working those muscles hard when they are out of the water recovering?
4. It is a great mental technique because it gets you to focus on the feeling of resting and recovering and helps you to stay relaxed right through your races.

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And the best part! Learning to recover and to turn the power off means you will learn to swim faster, swim faster for longer and have more power left for the last part of the race when it really matters.

It doesn't require doing more training, or more laps or eating special foods or buying special equipment. The Power Circle concept means you swim fast by doing less - i.e. learning to rest your arms when you are recovering! Who says you can't get something for nothing!

Tips for developing the Power Circle.

1. In fly, try the "Power Circle" chant. When you pull say to yourself power on. As your fingers leave the water to recover say power off. You will soon develop a rhythm of power on - power off - power on - power off which not only reminds you to use the power circle correctly but helps you develop a nice stroke rhythm as well. This rhythm in turn helps you to develop a long, relaxed stroke.

2. Try some slow - (very slow) swimming with a deliberate, purposeful power on - power off approach. Initially you may have to use fins to maintain momentum. In freestyle, try reaching out long and tall, catch the water and feel the pressure of the

water on your palm. Think power on and pull your body forward with power and strength. Then, as your fingers leave the water to recover, think power off and relax your arms, fingers and hands as you reach forward for the next stroke.

3. Imagine there is a big "on" button just out in front of you as you swim. With each stroke, reach forward, feel the water, then get your elbow high, ready for the catch. As you catch the water, imagine your hand is pushing the "on" button.

4. Use an exaggerated one-arm drill in free, back and fly where you feel a long, easy relaxed recovery with each stroke. This works particularly well with an exaggerated straight-arm recovery when doing one arm free and fly drills in training.

5. Think of cues - words like easy, smooth, relax, long, etc., in recovery to teach your brain to turn off the power.

Work when you have to - rest when you can,
This is the way to be the best in the land.
Turn the power on when your arms are in the water,
Turn the power off when your arms are out of the water (or moving forward).

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UPCOMING 2002 MASTERS SWIMMING EVENTS

Jun	15	USMS 10K Open Water Championships	Clemson, SC / Hartwell Lake	Jacque Grossman, jelq@innova.net
	15	Jack King 1 Mile Ocean Swim	Virginia Beach, VA	Betsy Durrant, 757-422-6811
	22,23	Dixie Zone LCM Championships	Greenville, SC	Roy Dessloch, 864-220-0209, TECoach@aol.com
	23	Patriot Masters LC Classic	George Mason U., Fairfax, VA	Cheryl Ward, 703-359-5366
	30	Terrapin Masters 800/1500 Meet	Uof MD, College Park, MD	Dave Diehl, 301-314-5372
Jul	13	2-Mile Cable Championships	Charlottesville, VA / Chris Greene Lake	Patty Powis, ppowis@aol.com
	27	RAM LCM Invitational	Raleigh, NC	Scott Allen, (w) 919-483-6214
	28	Dixie Zone Open Water Championships	Ellijay, GA / Carters Lake	Marty Hamburger, DynamoMasters@aol.com
Aug	4	DC Masters LC Meet	Fairfax, VA	Joann Leilich, 703-354-2130
	15-19	USMS LCM Championships	Cleveland, OH	Pieter Cath, 35400 Bainbridge Rd, Solon, OH 44139, 440-248-8270, cath.p@worldnet.att.net
	24	X-MEN Open Water Swim	Wrightsville Beach, VA	Alton Boshoff, 919-233-3861
Oct	5	NC State Senior Games Swimming	Raleigh, NC / Pullen Park	
	19 ?	NC Fall SCM Invitational	Hillsborough, NC	
Nov	2-3	Dixie Zone SCM Championships	Anderson, SC	