



VOL XVII-No 5

USA NATIONAL PUBLICATION FOR MASTERS SWIMMING

JUNE 1988

9th - 16th October 1988

WORLD MASTERS SWIM '88 INC.

The 2nd FINA/MSI World Masters Swimming Championships have been expanded to include 1m, 3m, and tower diving championships plus an exhibition 12 team water polo competition for players aged 35 & over.

The World Masters Championships are open to all Masters competitors who are registered with a national organization which is a member of either F.I.N.A. or M.S.I. (Masters Swimming International). Swimmers and divers aged 25 and older represent their club and cannot participate as representatives of their country. Likewise water polo teams must be club teams not national teams. All competitors are responsible for their own expenses which include travel, accommodation, food, and entry fees.

The 1st World Masters Swim, held in Tokyo in 1986 attracted 3500 swimmers. The addition of diving and water polo is expected to increase the number of competitors to over 4000, however the relaxed atmosphere plus the added attractions of World Expo-88 and Australia's 200th birthday celebrations will ensure that every competitor will have an enjoyable vist to Australia.

Brisbane, Australia's third largest city, has a subtropical climate. You can expect days to be sunny and dry with an average temperature of 22 Celsius (72 F). Nights will be cooler, but the temperature seldom drops below 16 degrees C (61 F). It is daylight at 5 a.m. and, not quite dark by 6:30 p.m.

Brisbane is the capital of Queensland, Australia's sunshine state, home of the Great Barrier Reef and of the Gold Coast area which is famous for its surf beaches, sophisticated night life and casino.

The swimming and diving (for competitors 25 years and older) will be conducted in the indoor Chandler complex which was built in 1982 for the Commonwealth Games. The water polo carnival will be held at the recently renovated Fortitude Valley pool.

To ensure easy access between these pools, the social venues, and the hotel areas, Jetset

Tours (Qld) has arranged a series of ground packages which will ensure a trouble-free stay in Brisbane. Air travel and pre and post Meet tours can also be arranged.

Brisbane would love to see you in October 1988 as would the worldwide fraternity of Masters swimmers. For details contact World Masters Swim '88 Inc., GPO Box 2262, Brisbane, Qld 4001 Australia. Telex: AA40776, Facsimile: Australia 7-229-9496.

Travel agents are invited to contact Jestset Tours at the above Telex and Fax numbers.

Gary Stutsel, Chairman
FINA MASTERS COMMITTEE
President MSI

Registration Day

Sunday, 9th October will be a great day. It's the first day of the swim and is cumpulsory registration day for all swimmers. We'll be making a day of it down at Chandler with all pools open and available for training and followed up by the "Great Aussie Barbeque". Registration commences at 7 a.m. and closes at 5 p.m. REMEMBER, HOWEVER, NO REGISTRATION - NO CARDS: NO CARDS - NO SWIM. As an example, if you have entered for six events, you must receive six cards, one for each event. You can appreciate that officials will have to be tough on competitors who do not cooperate. This is an enormous event. Over 4000 swimmers are expected and your co-operation will be appreciated.

Medals! Medals!

Even if you compete in only one event at the World swim, youcan win a medal. Placegetters from first to tenth in EVERY individual event receive a medal - not just for overall in your age group. As a result, medals constitute a large part of the cost of running the event. Over four thousand medlas will be awarded at a budgeted cost of more than \$32,000.

Central Australian Masters Games

Scheduled between the 20th-23rd, for info write Central Australian Masters Games Office, PO Box 1095, Alice Springs. NT 5750 Australia.

FREESTYLE.....Tom Lyndon

NEW, SCIENTIFIC WORKOUT CONCEPTS...David Salo's physiology column in Swimming World presents some new thinking on how to train. He starts by acknowledging that many coaches believe everything starts with a "strong aerobic base" (which I take to mean a lot more yardage than I care to contemplate). "Urbanchek (University of Michigan coach Jon Urbanchek), like many other coaches, believes in the early development of a strong aerobic base and opts for generally increasing milage to satisfy this need." Many Olympic hopefuls log 15,000 yards daily. That's bad news.

Here's the good news. "He recognizes, however, there is a point at which a continued increase in the training yardage will not account for significant gains in aerobic capacity, and once the maximum capacity is attained an altered training emphasis should begin (i.e., shift from aerobic to more anaerobic). This attainment of maximum aerobic capacity occurs within eight weeks of endurance-oriented training and...requires a minimal amount of training to be maintained at this level. In addition, because of the minimum amount of training required to maintain this aerobic capacity, a substantial drop in the training yardage can occur..."

I find it hard to accept that I can build my aerobic base in only 8 weeks, if I push my yardage high enough. Maybe that's the hooker. If attainment requires 15,000 yards, I will never get to my aerobic base, because 1,500-2,000 is my norm, 3,000 is a lot, and 5,000 is followed by prone activities. I wonder what would happen if I put in 5,000 regularly? I'll never know unless I'm at least semi-retired, have not too many physical and other afflictions, and am still curious. How much less (hopefully) yardage do older swimmers require for thier aerobic bases?

"(Urbanchek and Everett Uchiyama, So Cal Aquatics coach) follow the first 10 weeks of training with more speed specific work where the focus becomes oriented toward the more anaerobic aspects, often termed lactate tolerance, or anaerobic endurance, etc." This is what I believe in, aerobic base or no. Workouts should have at least one set that burns you out a bit in each of the swims. This makes you intimately involved with lactate tolerance, which causes that burning, aching and pain in our muscles and lungs. Lactate is the residue of used up effort and ends up where it can give you varying levels of signals. The body does learn to live with the repeated bad news of lactate buildup in the body.

Urbanchek uses monthly maximum effort 2,000 to 3,000 yard swims to determine how his swimmers relate to their aerobic peaks. (Do the flyers fly a 3,000?) Unfortunately the article does

not give any clues about how to relate the timed swims to where you should be. I find that concept tantalizing, since I expect there is a strong correlation and I certainly do not want to be working out any extra yards. Are you up for a monthly 3,000 yard time trial to find out where you're at?

Once the aerobic peak has been attained, both coaches use a set of monthly maximum effort 100's on a 6 to 8 minute interval to project their swimmers' competitive (race) performances for 100 yards and 200 yards. Urbanchek has found the race 100's are swum at about 90% of the "maximum effort" time. Therefore, if your 100's average to 1:20, your race 100 would be 1:08. He doubles the average 100 time to get the race 200. When I was swimming my fastest, I frequently swam a hard set of 4 x 100 on 4 minutes. At that time my race 100 was 1 to 2 seconds faster than 90% of the "maximum effort" swims, while my 200 was 2 to 4 seconds slower. Close.

To make sure the swimmers are giving their all in the 100 sets, their pulses are taken for 10 seconds at the finish of each swim. "A minimum requirement of 30-35 is expected (this represents over 90% of maximum heart rate)". He calls 30-35 OK for 90%, based on this. The maximum heart rate is 240. The swimmers are about 20 years old. He subtracts 20 from 240 leaving 220. He subtracts 10% (22) from the 220 leaving 198. The swimmers' 30-35 range for 10 seconds is the equivalent of 180-210 for 60 seconds. These counts bracket 198.

Older swimmers should reduce their 10 second counts by 1-1/2 beats for every 10 years over 20. At age 56 that puts me at 25-30. For the past 10 years I've been in that range on hard sets, so it seems to be applicable to me. I do know, from talking with other swimmers, that pulse norms do not apply to everyone. One competitor of mine tops 30. Another never gets to 25. They both swim hard.

Somehow, I would think, by now, the thousands of coaches, some of whom have a voracious appetite for making sense of the millions of recorded swim times residing in their notebooks, and the numerous researchers pouring over the existing data and carrying out new studies aided by omnivorous little computers to crunch numbers would have it all figured out.

There are computer programs on the market that claim to do some of this by taking your physical condition and each day's workout info in to output where you are at and what you need to do and not do. I may have to put myself in their "hands" to find out more. Anyone had themselves examined this way?

Another article reprinted from NEM NEWS - May 1988. I hope you enjoy these as much as I do! Gives us all something to think about.

Eating Fruits Before A Race

Send your nutrition questions to nutrition expert Linda Houtkooper, c/o Swimming World, P.O. Box 45497, Los Angeles, CA 90045.

Q: If I have a banana, orange or another fruit before a race, how long does it take before the carbohydrates start to give me energy?

J.K., Armonk, N.Y.

A: Most of the carbohydrate in fruit is in the form of sugar, a simple carbohydrate. The rest of the carbohydrate is in the form of the complex carbohydrates, starch and fiber. The amount of time it takes your body to digest and absorb the simple carbohydrates in fruits depends on what else you have eaten. If your stomach is empty and you eat only fruit, the simply carbohydrates or sugars will be digested and absorbed from your gut into your bloodstream in about 15 to 30 minutes. The sugar from the digested fruit circulating in your bloodstream is called glucose.

The starch in fruit takes longer to digest. First, the starch must be broken down into simple carbohydrates, sugars, by enzymes in your gut and then the sugars are absorbed. As a result, the sugars from starch will take a little more time to get into your bloodstream. The dietary fiber in the fruit will not be absorbed but will pass through your gut and will be excreted in a bowel movement.

The main fuel for your brain cells is the blood sugar glucose. Your muscle cells use mainly glucose and fat as fuel sources. Your body stores glucose in your liver and some muscle cells. So you can supply your cells with glucose fuel from the glucose you are absorbing from the digested fruit in your gut and from glucose stored in your liver and muscles. So, even if you don't eat

anything containing glucose before a race your body will have its stored glucose ready to supply your muscles with fuel for the race.

... If regular salad dressing is added . . . the fat content will be equal to or greater than in a hamburger.

Q: How much ice cream do I need to eat to get the same amount of calcium as a glass of low-fat milk contains? How much calcium do I need every day?

A: An eight-ounce glass of low-fat milk will contain about 300 milligrams of calcium and 120 calories. To get 300 milligrams of calcium from ice cream, you need to eat 1½ cups of ice cream which contains 475 calories; 1½ cups of ice milk contains 325 calories and will also give you 300 milligrams of calcium.

Your calcium requirements vary depending on your age. Check the following chart to find out the Recommended Dietary Allowance for someone your age:

Age in Years	Calcium (mgs.) RDA
6-10	800
11-18	1200
19-51+	800*

* Note: for female athletes ages 19-51, the National Institute of Health consensus recommends 1,000 to 1,500 milligrams.

Q: My friend eats salads at fast food places and she said they are better for me than a hamburger because they are low in fat. Is she right?

A: If your friend eats a salad made from fresh vegetables and chooses low-calorie dressing she will be eating less fat than if she ate a hamburger. However, if regular salad dressing is added to the salad, the fat content will be equal to or greater than that in a hamburger.

Other salads such as chef salads, taco salads and seafood salads vary in fat content. The following comparison from two fast-food menus will help you decide if your friend is right.

Menu Item	Calories per Serving	Grams of Fat	Fat as % Calories
Jack-in-the-Box			
Chef Salad no dressing	295	18	55
Chef Salad w/regular dressing	451	33	66
Chef Salad w/reduced calorie dressing	375	22	53
Taco Salad	377	24	57
Vegetable Salad w/cheese, no dressing	51	3	53
Vegetable Salad w/cheese and regular dressing	207	18	78
Vegetable Salad w/cheese and reduced calorie dressing	131	7	48
Hamburger McDonald's	288	13	41
Chef Salad no dressing	226	13	52
Chef Salad w/regular dressing	384	29	68
Chef Salad w/reduced-calorie dressing	251	14	50
Shrimp Salad no dressing	102	2.6	23
Shrimp Salad w/regular dressing	260	18.6	64
Shrimp Salad w/reduced-calorie vinaigrette dressing	127	3.6	26
Garden Salad (vegetables and cheese) no dressing	91	5.5	54
Garden Salad w/regular dressing	249	21.5	78
Garden Salad w/reduced-calorie dressing	116	6.5	50
Hamburger	263	11.3	39

About the Author

Linda Houtkooper, Ph.D., R.D., is a food and nutrition specialist with the Cooperative Extension Service, Nutrition and Food Science Department, at the University of Arizona in Tucson.

DR. SPRINT

(reprinted from Aqua-Master,
Oregon's newsletter)

CHOLESTEROL - You are going to die someday. Statistically, the cause will be heart disease, cancer, or an accident. It will probably be heart disease since it causes more deaths than cancer and accidents combined.

The good news is you have some control over the quality and perhaps quantity of your life. As a Masters swimmer you are a pioneer in the concept of exercise throughout life. Long after the runner, skier, or football player uses up their body, you can be a viable athlete. More importantly, you can be experimenters in the Dr. Sprint theory of "wagging-your-tail-on-the-day-you-die".

I felt very mortal recently when I got my blood cholesterol checked. My total blood fats count was 257! I was classified as a high-risk person! How can a top ranked, National record holder be classified as a heart disease high-risk individual? It was no mistake. I should have seen it coming years ago. Last year my cholesterol level was 227. Ten years ago my tests averaged 180. Ten years ago I was a semi-vegetarian health nut. In the last five years I've swam increasingly slower as my blood fat count increased.

For most people, heart disease is simply blood pressure damaging arteries and the damage causes blood fats to accumulate in the walls of your blood vessels. If you have high blood pressure & high blood fats, you get thick artery walls and a smaller diameter opening for blood to flow through. It's a gradual process, you'll hardly notice it. Don't be fooled, it is a major reason why you swim slower as you age. The best situation is to have low blood pressure and low cholesterol.

MY DOG ATE BETTER THAN ME - My dog "hundo" eats the simplest dog food I can buy. It's just ground up corn, wheat, and soybeans without sweeteners, chickens or cows added. One pound of food a day keeps this 47 pound lean athletic German Shorthair as the best example of how to live a life. When I give her a cob of corn (without butter) she promptly strips off every kernel (and sometimes eats the cob for roughage), she devours potatoes (without butter or sour cream) and when I'm cutting up broccoli & cauliflower (her favorite) she drools after the stems. I, of course, only ate the broccoli with cheese on top. I now realize my dog ate better than me. While I succumbed to the taste sensations of fatty foods and the convenience of fast foods "Hundo" merely ate to live. While I swam slower over the last 5 years, my 5 year old dog swam faster!



I know how Hundo will die. She will not slow down before her time. She will want to walk the day before and maybe even chase a thrown ball or point at a bird. Hundo will wag her tail on her last day.

WHAT IS YOUR SCORE? - Do you know your cholesterol count? Most Masters watch their diet but few know their count. Don't let your doctor just say "your cholesterol is OK", get the actual number. You should take control of your health. It cost me \$5.00 for my test through a mass American Heart Association cholesterol screening. Next time you see one advertised, get your score. Ignorance of your count is like swimming a race and not getting your time.

You don't deserve to die by the heart disease slow strangulation method. Your swimming will naturally slow with age. Heart disease accelerates this natural slowing. Based upon my studies your swimming should't slow by more than about .3% per year. If you are slowing down at closer to a 1% rate you should be alarmed. Remember also that swimming technique changes and workout methods can play a big role in any measured slowdown/speedup. In Masters swimming, winning or losing isn't important, few care how fast you are. Everyone is looking at their own time. A good lifetime goal might be to get slower at a slow rate (once you have mastered perfect technique - which takes about half a lifetime).

If your cholesterol count is too high, don't despair. Nathan Pritikin, a leading advocate of low-fat, high-complex-carbohydrate diet reduced his cholesterol level from 280 to 94 in about 30 years. An autopsy in 1985 showed he had almost a complete absence of atherosclerosis - no raised plaques, soft and pliable arteries just like a young man. Doctors were amazed that a man of about 70 could achieve this. What a master athlete he would have made!

Hundo, like you, has a stretching and exercising program, she prefers the taste of steak and cheese but lives on grains and vegetables. As the years progress she'll start having some poor days but she'll always snap back. The day will come when she fails to wake up and people will remark that just yesterday she played like a puppy. Now that's the way to live!

Will Hundo live a better life than you?

Think of it as a competition.

Robert Smith

DISCOVERING HOW TO HYDROPLANE

A Self Study in Sprinting

Below are some excerpts from an article written by N. Douglas Smith, Sacramento Masters swimmer and high school coach. An exciting experience in 1985 watching James Born break the 20-second barrier in the 50-yard freestyle led Smith to consider the effects of hydroplaning on swimmers. The article explains some of the reasoning behind hydroplaning:

"Propulsive strength demands high, horizontal body position, and high head and body position are vital in maximizing propulsion (strength = propulsion)."

"High body position depends on buoyancy and propulsion: increasing buoyancy involves full deep breaths, relaxation, and body composition. Horizontal body position relies on power to maximize leg propulsion through a six beat flutter kick."

"Maximum leg propulsion balances lowered hips due to a high head and chest creating the entire body to hydroplane. Pulling with high bent elbows increases power by reducing frontal resistance requiring less strength to maintain momentum".

Also considered are methods of reaching the hydroplaning potential:

"TIPS TO TRAIN"

--Power kick with fins keeping head up and arms along sides of body, or 6-beat flutter on kickboard (fins optional); Kick on side, optional - continuous, shallow kick.

--Vertical kicking drills with hands held up (flutter, dolphin, breaststroke, or egg-beater.)

--Pulling drills with hand paddles and pull buoys maintaining high, bent elbows (inner-tube optional). Catch out, pull in to waist, push out past hips: Inverted S Curve.

--Stretch body swim accentuating streamline reach and minimizing stroke count.

--Catch-up crawl drill maintaining full extension and reach - one hand always extended forward, pull doesn't begin until hands touch (good for reach.)

--Scooter drill using kickboard for balance as one arm pulls.

--Bilateral breathing alternating sides. (Previous 4 drills improve streamline towards axis, stroke reach, and balance. Begin kicking in a streamline position. The swimmer gradually adds the stroke to the kick. Concentrate on proper head and body position. This will help swimmers to learn to stay in a streamlined position.)

--Breath control drills involving full, deep breaths maintaining stroke rhythm and output based on anaerobic energy. Limit number of

breaths.

--Closed fist drills (slowly opening hand) to build a sense of resistance to hand in order to maximize propulsion potential - also develops kinesthetic awareness for arm pull efficiency: tension throughout pull.

--High elbow, finger drag - wide elbow with pull.

--Heads up crawl forcing high elbows and high head (look up and straight ahead - slowly lower eyebrows to surface, 6-beat flutter kick.)

--Stroke count: swim a 25 or 50 and count the number of strokes. Try to decrease the number of strokes each time a 25 or 50 is repeated.

Swim an easy to moderate pace and do not exaggerate the stroke. This is a good drill to

improve distance per stroke.

--Stroke count + time: same as above except the swimmer adds his/her time to the number of strokes. The object is to swim a fast time with a low number of strokes. Work on maintaining distance per stroke with a fast stroke rate.

--Turn-over: swim 25 yards as 12-1/2 fast + 12-1/2 easy. On the first half of the 25 try to move arms as fast as possible. The emphasis is on rapid arm movement, not distance per stroke. Good for developing or enhancing speed.

--Timed turns: when the swimmer's head passes the backstroke flags start the watch. When the head reutrns to the flags stop the watch."

Also recommended is a good weight training program for conditioning and power. Pre-season and early season are good times to power train (fewer repetitions at a slower pace with heavier weights.) Sprinters in competition use lighter weights to increase repetitions and speed of repetitions.

In conclusion, Smith recommends: "Train to bread pain barriers in order to create new comfort zones and threshholds of discomfort. New frontiers in pain pave the steps towards realizing potential. Sprinters must train with 100% output resting enough so that output can be maximum; concentration is never overlooked. 100% output intervals prepare sprinters physically and mentally for short, high intensity swims. Sprint drills improve endurance for short races...Explore the hydroplaning possibilities."

Ed. Note: Found this article among the papers I save from Newsletters and forgot to note which Newsletter! For this I apologize, but thanks for sending me all the Newsletters!

SWIM-MASTER

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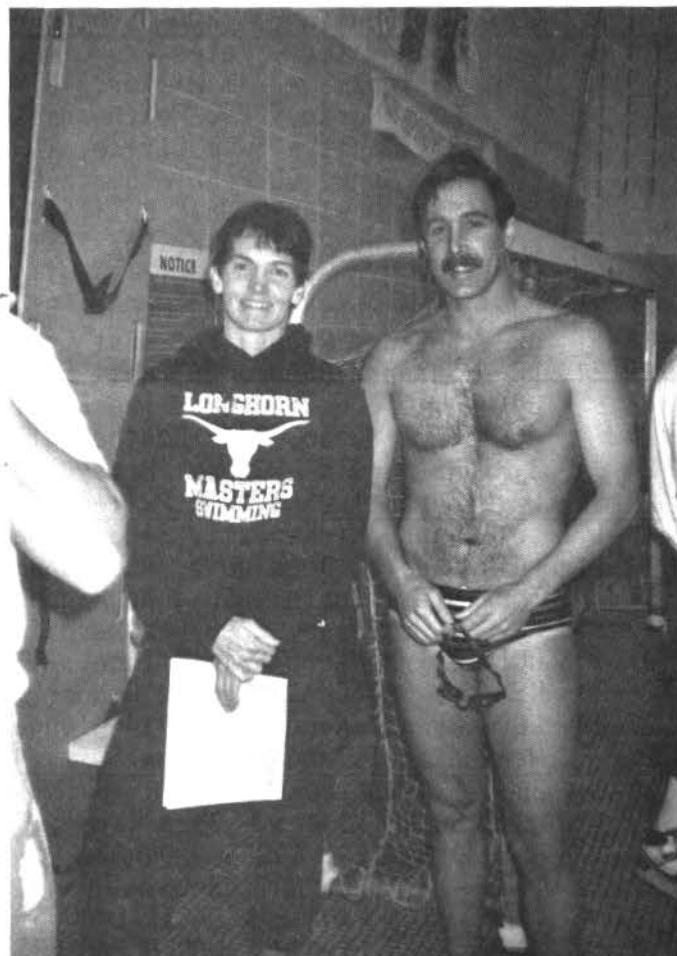
1988 RANSOM J. ARTHUR AWARD - It was announced in Austin, TX that this year's award was won by John R. Spannuth. John was the person who provided the leadership to organize the Masters Swimming program. He pulled everything together to get the program approved by the National AAU. He organized and directed the 1st ever National Masters Swimming meet held in Amarillo, TX in May of 1970. John has been President of the American Swimming Coaches Association, National Aquatics Administrator for the AAU, Ex. Di. of the U.S. Swimming Foundation, and Ex. Dir. of the Int. Special Olympics for the Kennedy Foundation. Currently, John is the Sr Aquatics Director for the YMCA in Norman, OK..... JOHN SPANNUTH



1992 FINA/MSI WORLD CHAMPIONSHIPS - Thought these Championships would go to Canada (the recommendation of the FINA Masters Committee) but when the vote came to the FINA Bureau, they voted for the USA and Indianapolis, IN. The only drawback is that the swimmers from the host country (USA) will be limited in the number of events that they can enter.....
AUSTIN, TX - SC NATIONALS - Huddie Murray and Ed Danehy did an astounding job in running this meet with 1405 participants! The largest meet ever, outside of California. Thanks for all those good swims.....



WILL & KITTY WORLEY



HUDDIE MURRAY & KEITH BELL

SWIM-MASTER

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SWIM CALENDAR

VOL XVII - No 5

JUNE 1988

JUN 11	LC - Las Vegas, NE - Curt Mosso, 2293 Featherhill Rd., Santa Barbara, CA 93108
18	LC - Ron Bank, 80 Pebble Beach Dr., Little Rock, AR 72212
19-20	LC - North Carolina State Games
24-26	LC - Maracaibo, Venezuela, David E.Morrill, M-91 Jet Int'l., POB 020010, Miami, FL
25	LC - Mishawaka Summerfest Swim Meet, 600 E 3rd St., Mishawaka, IN 46544
25-26	LC - Judy Meyer, 10333 Diego Dr. So., Boca Raton, FL 33428
25-26	LC - Elaine Dorris, 5101 Maryland Way, Brentwood, IN 37027
25-26	LC - Nancy Miller, 3741 Reed's Landing Cir., Midlothian, VA 23113
26	1500 M - David Diehl, 12511 Littleton St., Silver Spring, MD 20906
26	LC - Curt Mosso, 2293 Featherhill Rd., Santa Barbara, CA 93108
26	LC - Bobby Gallegos, 1315 Garrison, Port Orchard, WA 98366
31	LC - Tom Dunning, 11200 SE 6th, Bellevue, WA 98004
JUL 9	1 MI Open Water - Peter Crumbine, 3 Copper Bch Rd., Greenwich, CT 06830
9	2 MI Nationals - Jim Miller, 1417 Johnson Willis Dr., Richmond, VA 23235
9	LC - Curt Mosso, 2293 Featherhill Rd., Santa Barbara, CA 93108
10	LC - SDI Masters Swim Office, 1135 Garnet-K, San Diego, CA 92109
16	LC - Ron Bank, 80 Pebble Beach Dr., Little Rock, AR 72212
16-17	LC - Mary Dowlen, 106 C Bull St., Charleston, SC 29401
16-17	LC - Dorothy Ressiguie, Box 7, Tar Heel, NC 28392
21	LC - SCI Masters Swim Office, 1135 Garnet-K, San Diego, CA 92109
22-24	LC - Lisa Watson, 2104 Howell Blvd., Duluth, GA 30136
16	LC - Suzanne Rague, 263 West End Ave. #9-C, New York, NY 10023
22-24	LC - Suzanne Rague, 263 West End Ave. #9-C, New York, NY 10023
24	LC - Alicia Coleman, 24 The Point, Coronado, CA 92118
24	LC - Curt Mosso, 2293 Featherhill Rd., Santa Barbara, CA 93108
24	3 MI Nationals - George Mcvey, 477 Antlers Dr., Rochester, NY 14618
29-31	LC - Chris Truhol, 612 Pall-A-Grille Way #3, St. Petersburg, FL 33706
Aug 13-14	LC - Nancy Kirkendall, 3403 Gilden Dr., Alexandria, VA 22305
13-14	LC - Dorothy Ressiguie, P.O. Box 7, Tar Heel, NC 28392
14	Terrible Tripple - Suzanne Rague, 263 West End Ave. #9-C, New York, NY 10023
7-13-14	LC - Curt Mosso, 2293 Featherhill Rd., Santa Barbara, CA 93108
21	LC = SDI Masters Swim Office, 1135 Garnet-K, San Diego, CA 92109
25-28	USMS LC NATIONALS - Gene Donner, 717 South Road, East Aurora, NY 14052
27-28	LC - Brenda Hennessy, 1414 Glengarry Rd., Jacksonville, FL 32207
27	Manhattan Island Marathon Swim, 438 W 37 St., Suite 5-H, NY, NY 10018
OCT 10-15	2nd FINA/MSI WORLD MASTERS SWIMMING CHAMPIONSHIPS - Brisbane, Australia
MAY 1989	USMS SC NATIONALS - Boca Raton, FL
JUL 23-AUG 5 1989	MASTERS GAMES - Denmark
AUG 17-20	1989 - USMS LC NATIONALS - Grand Forks, ND
OCT 7-15	1989 - 1st FINA PAN PACIFIC AQUATIC GAMES - Indianapolis, IN
AUG 7-13	1990 - 3rd FINA/MSI WORLD MASTERS SWIMMING CHAMPIONSHIPS - Rio de Janeiro, Brazil
1992	- 4th FINA/MSI WORLD MASTERS SWIMMING CHAMPIONSHIPS - Indianapolis, IN