



BY JEFFREY GOOD - ST. PETE MASTERS
(reprinted from LMSC Newsletter)

Ah, the electricity of a swim meet: Lycra warriors pacing the deck with knots in their guts, backstroke pennants snapping in the breeze, the crack of the starter's pistol. I'm not even tempted.

When I joined St. Pete Masters five years ago at the age of 26, I told my teammates that I wanted to swim but not compete. They didn't believe me. "C'mon," they said, "you're one of the youngest people on the team. Look at all the people in their 70's who are racing. You don't want to be outdone by them do you?" Yep!

When I was a 7-year-old in Chicago, I begged my parents to let me join the Hinsdale swim team, one of the toughest age-group programs in the country. When I was 10, I studied the Guinness Book of World Records and mapped out my route to becoming the youngest Olympic swimmer ever. I got up at 5:45 every morning, strapped on my goggles and dutifully logged the yards - often more than 10,000 a day. But after awhile, swimming became more a chore than a dream. I fantasized about the day when I could swim for pleasure instead of pain. That day has come!

I have nothing but admiration for the hard-core contingent on St. Pete Masters. I even like to work out with them at times. But, like a lot of people who show up at North Shore pool, I don't want to be one of them. And the wonderful thing about St. Pete Masters is that there's room for people like me. Coach Bole will hand me a workout and tips on technique if I want them, but he'll also understand if my workout consists of imitating a manatee lounging on the lane lines.

Oh, about my Olympic career; it never came. I logged some minor glories: a medal here, a school record there. But the trophies I cherish most are the kind that don't sit on a shelf; childhood swimming taught me the value of fitness, and the virtue of pushing through pain to a goal. Those are lessons I've carried out of the pool and into adulthood. But you'll forgive me if I exercise some adult freedom of choice in the pool these days. That's me over there, floating on the kickboard and staring into the rising sun.

UNSOLICITED CONTRIBUTION FROM ALLAN CARON
(excerpts from the PNA Newsletter)

This is a completely unsolicited note from the trenches or, more accurately, the lanes. Actually lane 3, Bellevue Y, 6:30 am. Well, I lie somewhat. I usually wander in at about 6:35 am. Spending the next couple of minutes adjusting my goggles and cap. And finally somewhere in the middle of warmup, I take the plunge.

I'm not a very good swimmer..certainly not by my age group's standards. I console myself with the thought that someone has to be last (but in every event?). I am fortunate to have a couple of 40-45 women in my lane who keep me honest. Yes, I'd be quite competitive if I suddenly aged a few years and changed my sex. Fortunately, the top 8 places received medals at the last regionals. No one need know that my 5th place finish in the 200 breast was out of a field of five.

But, I suppose, participating in the meets does allow me to say with a straight face that I'm a "competitive swimmer". This is in my view a lot cooler than being a "competitive runner" these days. Runners ten to the skeletal. Competitive swimming evokes images of that 1972 poster of Mark Spitz among the people I still try to impress!

Meantime, I have taken the plunge and dive in--catching a glimpse through the window of the pitch-black sky. Wondering to myself why it is that I willingly submit to this every weekday. There is no answer to that question..other than the incredible feeling of guilt I'd feel if I didn't make it to workout. I have enough problems, without having to feel guilty for the rest of the day.

For some reason, my psychology is my own worst enemy. I have a habit of constantly calculating not how much I've already done in a particular set but how much is left to do. Usually in terms of a fraction of the whole. So, there I am, a fairly unhappy camper already in the midst of, say, a 400 pull--not a particularly hard swim in and of itself. But I manage to psyche myself out after the first 100 by saying to myself: oh great, I'm already tired and I have to do the same thing without stopping 3 more times! No wonder I find myself making trips to the bathroom or faking a gagging attack or suddenly discovering that the watertight seal in my goggles need adjusting. But, oddly enough, I love swimming. Though I can't say the same for my wife.

Oak Ridge Masters swimmer in record books

Oak Ridge Masters swimmer Janet Meservey recently earned a spot on the Long Course Top 10 ranking in five events.

From the list just published in January's Swim-Master magazine, the longtime Oak Ridger was ranked fourth in 200-meter breaststroke (6:56.2) fifth in 100-breast (3:14.5), sixth in 50-breast (1:32.6), seventh in 200-back (5:57.4) and 10th in 100-back (2:53.2). Be impressed that 76-year-old Meservey has been



Swimming Relays

Bobbe Smith

swimming Masters competition since the early 1970s when the Oak Ridge club was organized.

Bill Sewell was president of Oak Ridge Masters back then and was looking over the top 10 times just before a local meet. Janet recalls that he said, "There's no time for 200-back in your age group. I want you to enter it. If you win, you'll set a record."

"So," she said, "I did and he was right; I got the record." At the same meet, Lillian Kyte also got a national first by bettering the 200-breaststroke time in her age bracket. Back then these two and John Crews could be found breaking records at any given meet. Oak Ridge Masters was well represented in competitive masters.

Meservey is a native of Vermont who learned to swim from her parents when she was very young. She said, "We used to swim a lot as a family. Rivers, lakes and sometimes the ocean — it was all fun." Later she got some lifesaving instruction at the University of Vermont. During the last two years of school at Wheaton College in Massachusetts, she swam in the physical education program. She had never swum competitively until Masters.

In the early 1970s, Sewell, Oak Ridge aquatics direction at that time, asked Janet to organize an A.A.R.P. swimming program. That program evolved into what is



Janet Meservey

known now as Senior Swim, which is in the pool Monday, Wednesday and Friday mornings from 10-11 a.m. After agreeing to work in setting up the group, Janet wisely enrolled in some swim classes with the Red Cross. This led to her becoming a Water Safety Instructor; she taught classes for the Red Cross for many years.

Back to competition.

Meservey's first national championship was Long Course in Chicago in 1973. As well as helping the women place second, she personally won the 200-breaststroke event. Since that time she has swum in meets large and small, all over the country. She and her husband A.B. enjoy trailering extensively. They also enjoy biking and hiking. Often they combine vacation trips to include swim meets like the nationals in Spokane, Wash., zone meets all over Dixie, and various-sized meets in Corpus Christi, Texas, St. Louis, Mo., St. Petersburg, Fla., Fort Lauderdale, Virginia and North Carolina.

Rarely a year passes without Janet making Top 10. She also made Top 10 this past year in Short Course with a ninth in 200-Breast. Dirk Van Hoesen, also of Oak Ridge Masters, made seventh in the 200-breast in short course.

Although Janet prefers Long Course (50-meter pools), she also competes in 25-meters as well as the 25-yard short course. Be impressed too with her long distance swims. Technically, Long Distance seems to encompass anything from

a one hour postal swim to a ¼-mile and 10-mile. Some of these are in open water as the 10-mile Open Water off Seal Beach, Calif., but many are in lakes and rivers, and in the case of one in Wisconsin, a quarry of undetermined depth. There's usually a two or three-mile lake swim near Charlottesville, Va., which the Meserveys are apt to attend.

Janet will make the big effort to get to Short Course Nationals this year. They will be held May 16-19 in Nashville. "That Tracy Caulkins Natatorium is marvelous," she said. (She swam there last year.)

We can be impressed by this gutsy lady's accomplishments. Placing in the Top 10 is hard. It is a tally of swimmers in your particular age group from all over the United States who swam the different events during the past year. Times are compared and the top 10 emerge. Although it's an honor to have made the list, Janet has done well in so many meets she looks beyond the races. "I honestly love to swim," she says. "I like to visit different facilities and compare them. I also enjoy visiting with the people I have met at previous meets and getting acquainted with new people." She joins many in saying, "Awards are nice, but what do you do with them?" She'll often accept one as a souvenir and leave the rest.

Congratulations Janet — May you long endure!

Bobbe Smith writes about swimming for The Oak Ridger.

Reprinted from SOUTHEASTERN MASTER SWIMMER
**UNDERSTANDING THE TRAINING
PROCESS FOR SWIMMING**

by Terrence Laughlin

Director, Total Immersion Masters Swimming Camps

This summer a participant in one of my Masters swimming camps asked me for a training "recipe" for a particular event. The simplicity of such an idea has universal appeal. Just follow the directions and Voila! - success. Well, there are indeed training recipes for success in each event...hundreds of them. And they all work in some way for somebody.

But don't expect to find universal agreement among swimmers and coaches on which recipe is best. Countless paths lead to the same objective and much of the fun in training lies in mapping those routes, observing where they lead, then debating their merits with others who arrived at the same place from a different direction.

Guiding principles can help us discover the recipe that works best for us. While the application may change from person to person, the principles of training are both simple and universal. They apply to national champion or novice, teenager or septuagenarian, man or woman. They allow you to follow a systematic path to your desired goal of swimming faster, with fewer detours along the way.

Training is a quest for a better future - practicing to perfect skills, to go farther, faster, with less effort by exploiting the body's intriguing capacity for growing stronger in response to stress. (Remember the saying: "What doesn't kill me, makes me stronger.") The following principles will be your guide to achieving the training effect in swimming, but they can apply equally well to running, cycling or any endurance sport.

1. **Stress** - In a training medium this describes, not the effect of a bounced check or a demanding boss, but that of a workload imposed on the body. Carefully and selectively applied, it elicits a positive training response - the body gets stronger. When the workload is too heavy, the body can't adapt. Injury, exhaustion, frustration result.

2. **Progressive Overload** - As the body grows stronger (in response to training), in order to stimulate further gains, we need to increase the load. Judicious and systematic increases in frequency and intensity causes the organism to reach for yet a higher level. What was a proper training overload for your first month (or year) of training, will probably be insufficient to stimulate further adaptation in the third month (or year).

3. **Specificity** - The body adapts to the specific type of stress imposed. So training should closely approximate the activity you're preparing for, in distance, type, and intensity. One of the simplest, yet truest expressions of training advice I've ever heard is: "In order to swim faster, you have to...swim faster." Specificity also refers to efficient technique, which is a product of highly specific stroke patterns, and pitches, and adjustments to water pressure. A drift into poor technique, whether through fatigue or loss of concentration, means less efficient muscle groups bear

the workload, and you lose the optimal training effect.

4. **Consistency** - Even if you can spare as little as 30 minutes a day for training, you can still achieve reasonably good fitness, just through regularity. Physiologists tell us that we need to train at least 3-4 days a week, year-round to maintain fitness. For higher levels, we must, obviously, do more. (See #5.) Fitness can be easily lost in a few idle weeks, and it always takes longer to regain than it did to lose it. So, during a period when you're forced to decrease activity, even a modest amount of training is far better than none at all.

5. **Progression** - The nearer the top you get, the steeper is the mountain you're trying to climb. The more you improve, the harder it is to keep improving at the same rate. You'll reach 90% of your potential with a modest amount of effort, but beyond that, even small gains will come grudgingly. At that point, it becomes even more important to refine your approach, to swim smarter, rather than harder. The good news: The ground that has already been won will be relatively easy to hold. (See #4.)

6. **Recovery** - Work and rest are inseparable halves of the same equation. Appropriate recuperation from hard training, to allow the body to adapt and successfully handle harder workloads, is essential during a set, a workout, or a training cycle. You won't be able to repeatedly push your heart rate near its maximum in a set, unless it recovers near its resting level between efforts. Intense workouts must be balanced with recovery workouts. Harder, goal-oriented training cycles (see #7) can be very effective if built on a solid base of sub-maximal training.

7. **Cycles** - Steady, sub-maximal training is like putting money in the bank. We write checks for the payoff with intensive training. Write too many checks and you'll soon be bankrupt; your body will fail to adapt (see #1). The faster and harder you train, the sooner you'll run out of gas. This applies to individual workouts as well as training cycles of months and years. Particularly for Masters athletes whose "careers" may be measured in quarter- and half-centuries and whose primary goals are health and happiness, steady low-stress training keeps you injury-free, physically fresh, and fit for the long haul, week-in and week-out, year-in and year-out. (See #4.)

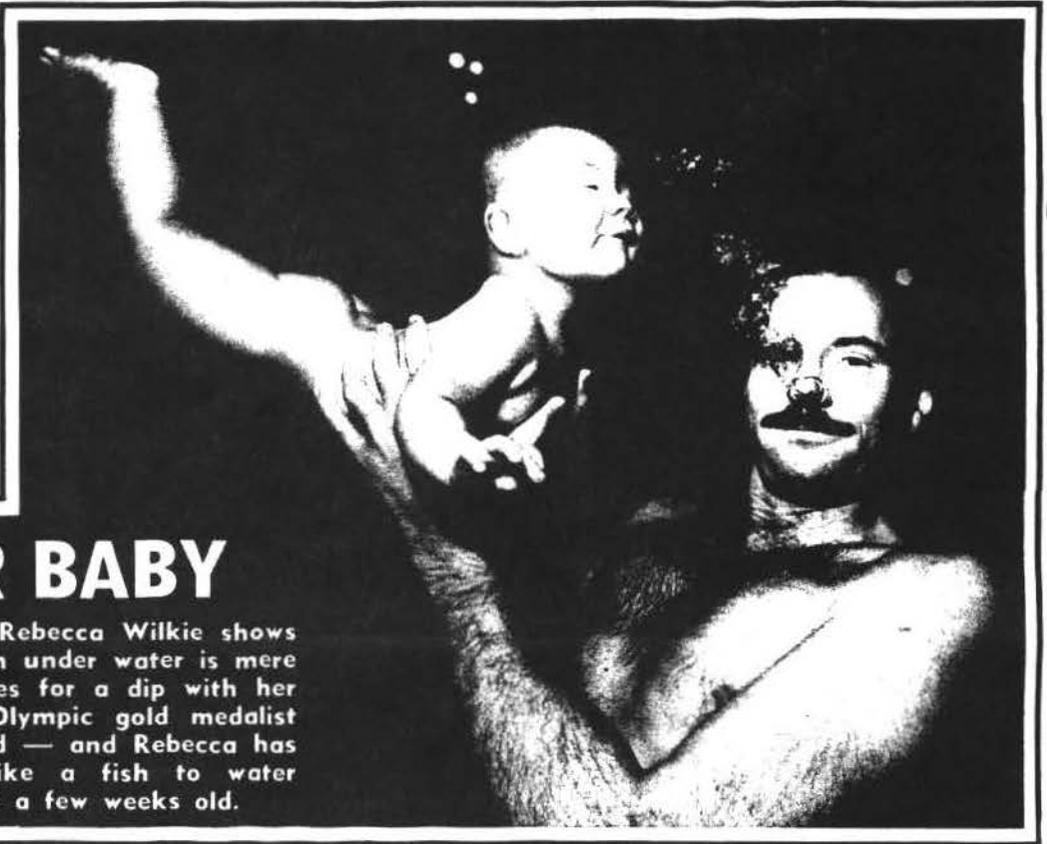
8. **Know Thyself** - The paramount consideration, superseding all of the seven preceding principles, is how you personally respond to training. Even in a group workout setting, 30 different swimmers will respond to a particular workout or set in 30 individual ways. And there will likely be as many different favorite sets and drills. So it's important to personally adapt any group training regime to suit your needs for best results. Self-awareness and careful self-monitoring (especially through keeping a log) are indispensable tools to aid in this.

Terry Laughlin is director of Total Immersion instructional camps and clinics for adult fitness and competitive swimmers and triathletes of any age or ability level. One of his camps will be held at Appalachian State University in Boone, NC, June 7-11, 1991. For information on any Total Immersion programs, call Terry at 914-294-3510, or write to him at 381 Main Street, Goshen, NY 10924.

This picture appeared
in the National
ENQUIRER! Why?

WATER BABY

"Glub!" Six-month-old Rebecca Wilkie shows that holding her breath under water is mere child's play as she goes for a dip with her dad David. He's an Olympic gold medalist swimmer from Scotland — and Rebecca has taken to the pool like a fish to water ever since she was just a few weeks old.



"REMEMBRANCE OF THINGS PAST": A HISTORY OF DC MASTERS

by Nancy Kirkendall with help from Frank and Nancy Clark, Bob and Susi Husson, Helen Hummer, Ed Emes, Meredith Smith, and Rita Shephard



This picture appeared in the Wavemaker. To help clarify the error that the 1975 LC Nationals were held in Ft. Lauderdale, I looked it up and they were held at the University of TN. (This picture was taken in an indoor pool.) John Bauman is on the left, then Matt Flanagan, Roy Stickney (on top), Larry Larimore, Ted Haartz, Ransom Arthur and Mark Coughlin. Flanagan and Coughlin represented DC Masters at this meet.



7 WORKOUT RULES FOR HIGH SPEED SWIMMING

To compensate for our aging and its physical deterioration we all must use our experienced and wiser brain in our workouts. A 10 year old lacking workout discipline is OK. A 70 year old without discipline is a sad sight. Here are some thoughts that guide my workouts:

1. DO A SEASON BLUEPRINT.

Determine when you want to achieve your best times (April/May?). Work backwards to identify what you must do to achieve those times.

2. FOLLOW YOUR BLUEPRINT PHILOSOPHY.

You don't have to be enslaved to it. Just follow the general direction. In my blueprint for example, you'll notice the trends and directions as the months go by:

- * Increased workout frequency
- * From longer distances to shorter
- * Develop techniques early, then power and finally speed
- * Progressively swim faster and also get more rest.

- * Increase workout effort gradually by going from discomfort workouts to hurt zone workouts and then pain zone and perhaps a bit of agony in workouts near the end of the season. (see article: "HURT_PAIN_AGONY")

- * Chart yardage - but beware, yardage may not reveal effort or stress. The 1500 yard/workouts on my chart reflect the maximum 50 minute lap swim time I now have. Ideally, I'd like a 1 to 1.5 hour workout whereby I could increase my yardage slightly and greatly increase my quality and rest.

3. SAVE YOURSELF FOR NEXT SEASON.

Never go to the edge either in a season or in a long hard series of workouts. This could risk damage to your body. Save something for next

season and the next ten seasons. "Burnout" shouldn't happen to a wise Masters Swimmer.

4. GOALS REVOLVE AROUND WORKOUTS.

90+% of your time is spent in workouts. That's where most of your goals should be. Use meets to increase motivation, learn techniques, and have fun. A big challenge for me is the "Dr. Sprint Postal Workout" at season end.

5. ALL WORKOUTS ARE CEREBRAL.

The brain should be going a mile a minute, far ahead of your body. The old saying "If you don't use it - you lose it" applies here. Nothing is as sorry as a dumb old athlete. In workouts, submerge yourself in a coordinated mind/body effort. THINK.

6. "SURVIVAL" WORKOUTS WASTE TIME.

A "survival" workout is where your body feels like a limp dishrag, your too tired to think and technique is forgotten. Whenever you invent or perform a workout, always ask why you are doing it. The answer should always have a higher purpose than "Get into shape". If you don't know why you are doing a particular swim, ask your coach. If you don't like the answer - stop. Don't workout so hard that you are a walking zombie the rest of the day. Is that health?

7. TEAM UP.

Try hard to persuade others to workout with you. By teaming up with others you can tap into their energy and increase your effort. Let others inspire you and the pain will melt.

1990 USMS NATIONAL TOP 10 LONG COURSE METERS SWIMMERS

50 M. BIRD WOMEN 30-34	1:40.58 RONNIE KAMPHAUSEN 55	4:16.33 NANCY DURSTEIN 60	37.09 PETER BETJER 48	NORTH KITSAP	50 YD. FREE
33.79 LINDLEY DOUGHTY 31	1:41.49 ROYANNE MOTTER 59	4:21.23 EDIE GRUENDER 62	50 M. BRST M E N 65-69	11-18-90	KATHRINE CASEY 42 PNA 6:09.37
34.72 ANN WINSTON 37	1:42.43 ANN M PISCIOTTA 59	4:24.20 MARIANNA HAGAN 61	42.33 BARTON GREENBERG 66	SHORT COURSE YARDS	1650 YD. FREE
35.15 SARAH BARKO 33	1:46.42 DORIS KLITZKE 55	4:29.91 ELFRIDE A ROGERS 62	43.32 LEE C. ARTH 65	P = P.M.A. RECORD	JANE MOORE 40 PNA 27:03.19
35.67 CATHY NEVILLE 37	1:49.15 BARBARA CALLISON 57	4:32.25 RUTH HOSKINSON 60	43.53 PAUL HUTINGER 65	R = REGIONAL RECORD	100 YD. BACK
35.99 SUZANNE H MEYER 31	1:50.17 JOAN E ALEXANDER 55	5:00.17 BRADYS OLSEN 64	43.82 HENRY KIVI 66	M = NATIONAL RECORD	GINGER PIERSON 44 ORBG 1:17.26
36.49 C.MARRA-LEWIS 30	1:57.04 DONNA EDELSBAUM 55	5:54.64 JOAN MCINTYRE 64	44.38 TOM DOMELL 68	W = WORLD RECORD	200 YD. BACK
36.59 CATHY L COOLEY 32	1:55.95 SHIRLEY MCFARLAND 55	200 M. I.M. WOMEN 60-64	44.41 ROBERT A MORRISON 69	U = UNOFFICIAL TIME (1 WATCH)	GINGER PIERSON 44 ORBG 2:46.54
36.61 DEBORAH CAHN 32	1:56.90 EMILIE J WILSON 57	3:20.22 GAIL ROFER 61	44.68 FRANK M. PIERCE 65		KATHRINE CASEY 42 PNA 2:53.72
36.78 SUSAN BLATTNER 32	200 M. FLY WOMEN 55-59	3:24.25 NANCY MACBETH 61	44.73 ABRASHA BRAININ 67		50 YD. BRST
36.80 JAN BUTLER 30	2:07.01 RONNIE KAMPHAUSEN 55	3:24.26 BETTY JANE RUSS 63	44.92 HERBERT OSIER 67		GINGER PIERSON 44 ORBG 34.46
50 M. BRST WOMEN 30-34	2:46.75 ANNE MCBUIRE 55	2:40.07 JUNE KRAUSER 64	45.14 GEORGE MELICH 65		KATHRINE CASEY 42 PNA 36.65
36.19 LISA BENNETT 24	2:46.39 ANN M PISCIOTTA 59	2:41.45 FLORENCE CARR 64	100 M. BACK M E N 70-74		ROBERTA MOORE 43 PNA 41.72
37.57 DEB A JOSLYN 31	4:02.95 SHIRLEY MCFARLAND 55	2:41.67 ANNE B. ADAMS 62	1:33.78 A. VANDE WEGHE 74		100 YD. BRST
37.67 B.BREISACHER 32	4:02.71 JOAN E ALEXANDER 55	2:44.26 DELLA M SEHORN 62	1:35.39 ANDREW HOLDEN 71		T. WITTENBERG 23 PNA 1:12.01
37.98 M.MORROBERTS 32	4:10.49 BARBARA CALLISON 57	2:47.85 EDIE GRUENDER 62	1:36.67 ALDO V DA ROSA 72		200 YD. BACK
38.15 JULIE ARBUTHNOT 30	4:15.89 DONNA EDELSBAUM 55	2:52.20 LISA BOSKOTY 60	1:38.09 WILLIAM ROME 74		T. WITTENBERG 23 PNA 2:42.69
38.24 GAIL MCCARNEY 30	4:21.41 ANN DALLAM 59	2:54.12 BERTHESE FREETHAM 62	1:39.79 BRION WINGSHIP 72		100 YD. I.M.
38.75 JANICE D GILLIES 32	4:25.14 MALCHIA S. OLSHAN 59	400 M. I.M. WOMEN 50-54	1:39.82 EDWARD MORAN 72		T. WITTENBERG 23 PNA 1:14.43
38.87 TERRIE L MONFORD 31	4:25.24 DONNA MONROE 58	3:00.15 GAIL ROFER 61	1:41.50 G. EDWARD JOHNSON 71		200 YD. I.M.
39.01 DENA T. BATES 32	4:26.12 ANN MCBUIRE 55	3:26.12 JUNE KRAUSER 64	1:42.23 BILL UHRICH 70		T. WITTENBERG 23 PNA 2:40.51
39.20 LAURA CHASE 20	7:13.55 RONNIE KAMPHAUSEN 55	3:54.37 NANCY MACBETH 61	1:49.33 JOHN HANKE 71		
400 M. I.M. WOMEN 25-29	7:24.17 ANNE MCBUIRE 55	3:09.49 FLORENCE CARR 64	1:49.61 JERRY SIEFERT 72		
5:44.08 MARYANN STEVENS 37	7:37.70 ANN M PISCIOTTA 59	3:14.23 BETTY RUSE 62	100 M. BACK M E N 75-79		
5:45.93 CATHERINE MOHN 37	7:40.75 ROYANNE MOTTER 59	3:24.21 BARBARA OWENS 60	1:35.40 EDWARD SHEA 75		
5:53.16 TERRI KING 36	7:57.70 BARBARA CALLISON 57	3:28.92 EDIE GRUENDER 62	1:40.13 GEORGE WAY 75		
5:55.56 CATHY HESSON 37	8:06.89 DONNA EDELSBAUM 55	3:20.20 JOYCE BAHLER 60	1:42.79 DICK WESTERFIELD 75		
5:56.24 ELAINE FINCHAM 35	8:07.66 ARIENNE S. PIPES 56	3:22.57 NANCY DURSTEIN 60	1:48.34 DAVID MALCOLM 77		
6:06.59 KRIS WINGENROTH 38	8:11.48 JOAN E ALEXANDER 55	3:41.50 ROBERTA TURCOTTE 62	1:50.82 DEXTER WOODFORD 76		
6:09.74 JACKIE WALKER 38	8:12.06 MALCHIA S. OLSHAN 59	50 M. FREE WOMEN 65-69	1:52.29 FRANK TILLOTSON 75		
6:12.18 N.STEADMAN-MARTIN 36	8:26.12 DONNA MONROE 58	37.26 PETEY M. SMITH 66	1:55.01 CHARLES SALIE 78		
6:13.14 KRISSE MACCOURY 37	50 M. FREE WOMEN 60-64	37.67 DOROTHY DONNELLY 68	1:55.63 MIKE OFFNER 75		
6:24.56 LIL HANEMAN 35	35.26 GAIL ROFER 61	38.64 FLORENCE CARR 65	1:57.00 JOHN WITTIER 75		
50 M. BACK WOMEN 50-54	35.55 CLARA WALKER 64	39.73 PUTH H. BAAR 67	50 M. FREE M E N 60-64		
38.17 BETSY JORDAN 53	36.94 MARGARET TIMMINS 60	40.09 DOROTHY LA CHASSE 66	36.62 GERSON SOBEL 50		
44.24 LUCILLE GRIFFIN 51	37.42 JEAN TROY 63	40.24 JEANNE MERRYMAN 67	37.84 FRANK BELLAIRE 91		
44.54 SUSAN BLAKE 51	37.63 BETTY J. RUSS 62	40.33 C.WILLIAMS 66	40.21 LLOYD OSBORNE 91		
45.32 ANN CHAMP 54	37.68 FLORENCE CARR 64	40.89 CHARLOTTE COSTELLO 67	40.65 DAVID MC ATEE 90		
45.51 SUSAN RITTENHOUSE 52	37.78 CYNTHIA BRUCE 62	41.78 BILLIE BURRILL 69	40.89 TOM MONAHAN 90		
45.67 ANGELA P KONIG 52	38.19 ANNE B. ADAMS 62	43.09 LOIS NOCHMAN 65	42.62 BILL SHOTT 90		
46.19 CEIL BLACKWELL 50	38.29 BONNY GATCH 60	400 M. FREE WOMEN 65-69	43.36 DAN DOTTERWEICH 81		
46.71 JUDY KENNEDY 52	39.04 DELLA M SEHORN 62	6:30.19 FLORENCE CARR 65	44.89 JIM PENFIELD 82		
47.49 JANET LAMOTT 54	100 M. FREE WOMEN 60-64	6:36.11 PETEY M. SMITH 66	45.37 JOHN H. BURNSIDE 90		
47.60 P. TULLMAN 53	1:21.90 GAIL ROFER 61	7:23.56 GRACE ALTUS 66	46.82 LEE STARR 81		
200 M. BACK WOMEN 50-54	1:24.23 JEAN TROY 63	7:28.65 RUTH H. BAAR 67	50 M. BACK M E N 80-84		
3:03.56 BETSY JORDAN 53	1:24.67 BETTY J. RUSS 62	7:30.79 PARY LEE WATSON 68	50.27 JACK HOEY 80		
3:21.90 SPERRY RADEMAKER 50	1:25.91 FLORENCE CARR 64	7:45.53 DOROTHY DONNELLY 68	51.28 TOM MONAHAN 90		
3:22.10 SUSAN BLAKE 51	1:29.71 JUNE KRAUSER 64	7:58.24 NANCY PHILLIPS 65	52.95 HERB EISENSCHMIDT 83		
3:24.80 ANGELA P KONIG 52	1:30.79 EDIE GRUENDER 62	8:05.21 LOIS NOCHMAN 65	57.09 JIM PENFIELD 82		
3:25.57 LUCILLE GRIFFIN 51	1:32.01 ELLEN VOSE 60	8:06.24 BILLIE BURRILL 69	57.59 LEE STARR 81		
3:32.36 S. JAREMSKI 32	1:32.04 DELLA M SEHORN 62	8:06.45 JEANNE MERRYMAN 67	1:02.92 BILL SHOTT 90		
3:32.56 DOROTHY BURKE 50	1:32.68 ROBERTA TURCOTTE 62	100 M. BACK WOMEN 65-69	1:17.09 HAROLD BARR 80		
3:40.40 CEIL BLACKWELL 50	1:32.85 IRENE RADSPINKER 61	1:01.59 DORIS STEADMAN 65	100 M. BACK M E N 80-84		
3:41.65 ROBERTA BOBERSKI 50	200 M. FREE WOMEN 60-64	1:42.44 REGAN KENNER 66	1:53.74 JACK HOEY 80		
3:41.92 ANN H SAYRE 50	2:59.07 CLARA WALKER 64	1:48.24 FLORENCE CARR 65	1:57.29 TOM MONAHAN 90		
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3:16.58 JOYANN LEITCH 51	3:00.48 BETTY JANE RUSS 63	1:52.56 C.WILLIAMS 66	2:11.66 LEE STARR 81		
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3:28.91 MARGT JESE 52	3:11.68 JUNE KRAUSER 64	1:58.52 DOROTHY DONNELLY 68	2:44.19 DON NEEFE 81		
3:44.81 JOHNNIE DETRICK 54	3:12.00 ANNE B. ADAMS 62	1:57.35 SARAH ALLNUTT 66	200 M. BACK M E N 80-84		
3:45.20 HELGA LUKOWITZ 53	3:21.89 ROBERTA TURCOTTE 62	200 M. BRST WOMEN 80-84	4:14.73 JACK HOEY 80		
3:49.87 ALICE JONES 52	3:23.05 MARGARET TIMMINS 60	5:43.46 ELSA MATTILA 80	4:20.27 HERB EISENSCHMIDT 83		
3:50.27 SANDRA S. YENSON 51	3:24.29 ELLEN VOSE 60	5:45.55 CATHERINE CRESS 80	4:23.46 TOM MONAHAN 90		
3:53.41 BARBARA JAREMSKI 52	3:25.65 DELLA M SEHORN 62	6:54.26 KATHRINE PELTON 94	4:42.92 LEE STARR 81		
3:57.12 A.B. BELLEM 52	800 M. FREE WOMEN 50-54	7:04.15 DOROTHY HOPKINS 90	4:52.09 JIM PENFIELD 82		
4:00.51 DANN STROUPE 32	1:02.50.44 CLARA WALKER 64	7:24.77 ELIZABETH JOHN 80	50 M. BACK M E N 80-84		
200 M. FLY WOMEN 50-54	1:02.55 GAIL ROFER 61	10:21.71 HAZEL B BRESSIE 81	49.49 BILL SHOTT 90		
3:21.31 SPERRY RADEMAKER 50	1:07.55 BETTY JANE RUSS 62	200 M. I.M. M E N 19-24	55.46 JIM PENFIELD 82		
3:22.10 JAYNE LAMBE 53	1:16.58 JEAN TROY 63	2:25.02 CHRIS SIKES 19	56.96 DAN DOTTERWEICH 81		
3:24.55 BETSY JORDAN 53	1:20.29 JUNE KRAUSER 64	2:25.58 MARK TOMAT 24	1:02.23 HARRY BARR 80		
3:28.74 DOROTHY A BURKE 50	1:24.00 J. FLORENCE CARR 64	2:26.30 MICHAEL COLLINS 24	1:06.03 HERB EISENSCHMIDT 83		
3:47.38 SUSAN BLAKE 51	1:46.16 ANITA L HAZEN 52	2:29.60 CHRIS GODFREY 24	1:06.43 JOHN H. BURNSIDE 80		
3:45.22 LUCILLE GRIFFIN 51	1:45.22.86 EDIE GRUENDER 62	2:30.17 JAMES BYNUM 22	1:24.54 ALBERT SILSDORF 80		
3:57.59 JEANNE LITTLE 53	1:45.72 ROBERTA TURCOTTE 62	2:31.10 MOLAN STEINER 24	1:25.15 ALFRED GUTH 81		
4:01.43 B. JAREMSKI 52	1:51.75 BETTY T MC WILLAN 61	2:33.97 ERIK ROOKHUIJZEN 24	1:35.91 DON NEEFE 81		
4:06.40 ROBERTA BOBERSKI 50	100 M. BRST WOMEN 60-64	2:34.65 STEVEN WALLIE 24	1:36.50 HAROLD HOFFMAN 82		
4:10.71 DOT J MERRY 52	1:46.44 GAIL ROFER 61	2:34.70 JERRY S. SANDREW 24	100 M. BRST M E N 80-84		
4:50.33 BETSY JORDAN 53	1:48.70 LISA BOSKOTY 60	2:35.26 C. PARADEE 21	2:11.95 DAN DOTTERWEICH 81		
4:59.53 DOROTHY A BURKE 50	1:52.46 JUNE KRAUSER 64	5:11.99 CHRIS SIKES 19	2:13.74 BILL SHOTT 90		
7:00.24 SPERRY RADEMAKER 50	1:52.84 JOYCE BAHLER 60	5:16.62 MICHAEL COLLINS 24	2:30.03 HAROLD BARR 80		
7:11.10 JAYNE LAMBE 50	1:58.01 DOROTHY HAZEN 62	5:20.49 MARK TOMAT 24	2:32.92 HERB EISENSCHMIDT 83		
7:13.75 SUSAN BLAKE 51	1:58.59 MARIANNA HAGAN 61	5:20.49 MARK TOMAT 24	2:33.06 ALFRED GUTH 82		
7:16.96 CHARLOTTE JENKINS 31	2:00.37 NANCY MACBETH 61	5:20.52 GEORGE FRAZER 22	2:34.77 ALBERT SILSDORF 80		
7:25.71 BARBARA JAREMSKI 52	2:01.92 BONNY GATCH 60	5:27.19 EDWARD HOGANSON 22	100 M. FLY M E N 80-84		
7:29.84 MARGT JESE 52	50 M. FLY WOMEN 60-64	5:27.99 ERIC ROOKHUIJZEN 24	2:27.78 BILL SHOTT 90		
7:34.92 ROBERTA BOBERSKI 50	40.11 GAIL ROFER 61	5:47.58 ERIC POOL 24	2:25.69 BILL STINSON 81		
7:50.53 MARYLOU SCHULZ 50	40.11 ANNE B. ADAMS 62	5:57.61 ANTHONY A. KUNG 23			
50 M. FLY WOMEN 55-59	44.64 EDIE GRUENDER 62	6:22.69 KEITH J YOST 21			
40.88 ROYANNE MOTTER 58	45.06 JUNE KRAUSER 64	50 M. BRST M E N 45-49			
42.02 BEVERLY MYERS 55	46.63 BETTY J. RUSS 63	33.67 RICHARD NEBBIT 45			
42.20 RONNIE KAMPHAUSEN 55	47.50 JEAN TROY 63	34.41 THOMAS BOAK 47			
42.39 DORIS KLITZKE 55	49.52 NANCY MACBETH 61	35.77 SCOTT GUTHRIE 45			
42.70 ANN J YAY 56	51.98 ELFRIDE A ROGERS 62	36.07 P. GROSZLAN 46			
42.81 DIANE STOWELL 55	53.41 ALICIA COLEMAN 64	36.14 N.A. OLZMANN 47			
43.23 ANNE MCBUIRE 52	200 M. FLY WOMEN 60-64	36.17 FREDERICK FIELD 47			
44.49 BARBARA CALLISON 57	3:32.37 GAIL ROFER 61	36.77 JIM DRAGON 46			
46.07 DONNA EDELSBAUM 56	3:38.70 JUNE KRAUSER 64	37.05 CHARLES LEE 46			
46.87 ANN M PISCIOTTA 59	3:39.98 BETTY JANE RUSS 63	37.08 DAVE FRANK 46			
100 M. FLY WOMEN 55-59					
1:39.19 ANNE MCBUIRE 55					

50 YD. BRST			
MAYNE CARLSON	70 PNA	1:18.71	
100 YD. BRST			
PAT MATTHIEN	74 PNA	2:20.33 R	
200 YD. BRST			
PAT MATTHIEN	74 PNA	5:04.91	
50 YD. FLY			
MAYNE CARLSON	70 PNA	1:17.85	
100 YD. FLY			
PAT MATTHIEN	74 PNA	2:17.79	
200 YD. I.M.			
PAT MATTHIEN	74 PNA	4:49.11	
WOMEN 75-79			
100 YD. FREE			
MARION MUELLER	78 PNA	2:14.57	
50 YD. BACK			
MARION MUELLER	78 PNA	1:04.62	
100 YD. BACK			
MARION MUELLER	78 PNA	2:20.53	
200 YD. BACK			
MARION MUELLER	78 PNA	4:53.59	
100 YD. I.M.			
MARION MUELLER	78 PNA	2:57.32	
MEN 19-24			
100 YD. FREE			
DOOG TIMPE	23 PNA	1:00.37	
200 YD. FREE			
DOOG TIMPE	23 PNA	2:15.26	
50 YD. BRST			
TODD GERMAN	24 PNA	31.65	
100 YD. BRST			
TODD GERMAN	24 PNA	1:10.00	
50 YD. FLY			
TODD GERMAN	24 PNA	27.45 U	
100 YD. FLY			
DOOG TIMPE	23 PNA	1:09.56	
100 YD. I.M.			
TODD GERMAN	24 PNA	1:04.83	
200 YD. I.M.			
DOOG TIMPE	23 PNA	2:34.12	
MEN 25-29			
50 YD. FREE			
JAY GILLEN	25 PNA	25.47	
100 YD. FREE			
JAY GILLEN	25 PNA	56.88	
DWIGHT BOLTON	26 PNA	57.28	
500 YD. FREE			
LARRY DE GROEN	29 PNA	5:36.72	
DWIGHT BOLTON	26 PNA	6:04.33	
1650 YD. FREE			
LARRY DE GROEN	29 PNA	19:52.99	
100 YD. BACK			
TOM HARRYLOCK	29 PNA	1:11.58	
200 YD. BACK			
LARRY DE GROEN	29 PNA	2:21.90	
TOM HARRYLOCK	29 PNA	2:42.44	
100 YD. BRST			
LARRY DE GROEN	29 PNA	1:10.03	
200 YD. BRST			
LARRY DE GROEN	29 PNA	2:39.38	
50 YD. FLY			
DWIGHT BOLTON	26 PNA	28.58	
JAY GILLEN	25 PNA	28.68	
100 YD. FLY			
JAY GILLEN	25 PNA	1:06.13	
DWIGHT BOLTON	26 PNA	1:06.98	
100 YD. I.M.			
JAY GILLEN	25 PNA	1:08.05	
TOM HARRYLOCK	29 PNA	1:11.58	
MEN 30-34			
50 YD. FREE			
MARK APPLEBY	32 PNA	22.75	
DAVID THORSON	31 PNA	23.87	
100 YD. FREE			
MARK APPLEBY	32 PNA	51.82	
M. FITZGERALD	32 PNA	52.73	
DAVID THORSON	31 PNA	54.33	
CURTIS TROUPE	33 PNA	54.43	
MIKE JONES	30 PNA	57.52	
200 YD. FREE			
M. FITZGERALD	32 PNA	1:56.94	
MARK APPLEBY	32 PNA	1:58.90	
CURTIS TROUPE	33 PNA	2:03.78	
MIKE JONES	30 PNA	2:06.87	
500 YD. FREE			
GEOFFREY ANDERSON	30 PNA	5:30.91	
CURTIS TROUPE	33 PNA	5:42.89	
1650 YD. FREE			
MARK VAN ACHTY	30 PNA	19:16.01	
CLIFFTON WARD	34 PNA	20:27.54	
ANDY WEIFFENBACH	30 PNA	21:47.92	
100 YD. BACK			
JOHN ZELL	33 OREG	1:02.45	

GEOFFREY ANDERSON	30 PNA	1:05.56	
200 YD. BACK			
JOHN ZELL	33 OREG	2:18.32	
CLIFFTON WARD	34 PNA	2:21.94	
50 YD. BRST			
MARK APPLEBY	32 PNA	30.11	
200 YD. BRST			
CLIFFTON WARD	34 PNA	2:36.03	
GEOFFREY ANDERSON	30 PNA	2:38.16	
100 YD. FLY			
GEOFFREY ANDERSON	30 PNA	58.87	
M. FITZGERALD	32 PNA	1:00.41	
MIKE JONES	30 PNA	1:01.77	
100 YD. I.M.			
MARK APPLEBY	32 PNA	59.47	
M. FITZGERALD	32 PNA	1:02.23	
200 YD. I.M.			
CLIFFTON WARD	34 PNA	2:19.73	
M. FITZGERALD	32 PNA	2:21.18	
400 YD. I.M.			
GEOFFREY ANDERSON	30 PNA	4:47.21	
CLIFFTON WARD	34 PNA	5:01.83	
MEN 35-39			
50 YD. FREE			
RICH HENDRICKSON	38 PNA	25.28	
JAMES STRETCH	38 PNA	26.20	
ROCKY PHOENIX	36 PNA	29.89	
BRUCE LOMAX	39 PNA	35.88	
100 YD. FREE			
STEPHEN FREEBORN	35 PNA	56.75	
RICH HENDRICKSON	38 PNA	56.85	
MICHAEL EVANS	36 PNA	58.17	
JAMES STRETCH	38 PNA	58.48	
BRUCE LOMAX	39 PNA	1:24.42	
200 YD. FREE			
HUGH MOORE	36 PNA	2:04.13	
MICHAEL EVANS	36 PNA	2:07.38	
JAMES STRETCH	38 PNA	2:16.13	
1650 YD. FREE			
GREGORY HARRISON	38 PNA	22:01.41	
50 YD. BACK			
ROCKY PHOENIX	36 PNA	48.29 U	
BRUCE LOMAX	39 PNA	55.63	
100 YD. BACK			
BRUCE LOMAX	39 PNA	1:59.90	
50 YD. BRST			
ROCKY PHOENIX	36 PNA	46.37	
50 YD. FLY			
STEPHEN FREEBORN	35 PNA	26.64	
RICH HENDRICKSON	38 PNA	28.10	
100 YD. FLY			
STEPHEN FREEBORN	35 PNA	1:00.73	
HUGH MOORE	36 PNA	1:03.19	
MICHAEL EVANS	36 PNA	1:06.64	
200 YD. FLY			
HUGH MOORE	36 PNA	2:22.68	
100 YD. I.M.			
MICHAEL EVANS	36 PNA	1:06.52	
HUGH MOORE	36 PNA	1:06.65	
BRUCE LOMAX	39 PNA	1:50.43	
200 YD. I.M.			
STEPHEN FREEBORN	35 PNA	2:20.63	
MICHAEL EVANS	36 PNA	2:31.07	
400 YD. I.M.			
GREGORY HARRISON	38 PNA	4:56.77	
HUGH MOORE	36 PNA	4:57.97	
MEN 40-44			
50 YD. FREE			
STEVEN PETERSON	44 PNA	27.39	
WILL HASBROOK	42 PNA	27.56 U	
FRED HOLM	42 PNA	36.34	
100 YD. FREE			
WILL HASBROOK	42 PNA	1:03.38	
DAVID STERN	40 PNA	1:04.89 U	
FRED HOLM	42 PNA	1:47.00	
200 YD. FREE			
FRANK WARNER	41 PNA	1:58.07	
500 YD. FREE			
DAVID STERN	40 PNA	6:34.94	
50 YD. BACK			
FRANK WARNER	41 PNA	30.02	
DAVID STERN	40 PNA	30.94	
STEVEN PETERSON	44 PNA	37.14	
FRED HOLM	42 PNA	52.61	
100 YD. BACK			
DAVID STERN	40 PNA	1:10.86	
200 YD. BACK			
FRANK WARNER	41 PNA	2:21.21	
50 YD. BRST			
STEVEN PETERSON	44 PNA	32.41	
WILL HASBROOK	42 PNA	36.45	
50 YD. FLY			
STEVEN PETERSON	44 PNA	29.99	
200 YD. I.M.			
STEVEN PETERSON	44 PNA	2:32.26	

MEN 45-49			
50 YD. FREE			
RICHARD GOLDEN	49 PNA	35.39	
100 YD. FREE			
RICHARD GOLDEN	49 PNA	1:19.76	
200 YD. FREE			
RICHARD GOLDEN	49 PNA	3:08.06	
500 YD. FREE			
GORDON GRAY	45 PNA	6:40.74	
1650 YD. FREE			
GORDON GRAY	45 PNA	23:16.45	
50 YD. BACK			
GORDON GRAY	45 PNA	36.22 U	
ROBERT GRIFFITH	48 PNA	40.68	
200 YD. BACK			
GORDON GRAY	45 PNA	2:47.65	
50 YD. BRST			
ROBERT GRIFFITH	48 PNA	41.73	
50 YD. FLY			
ROBERT WATKINS	48 PNA	31.35	
ROBERT GRIFFITH	48 PNA	37.40	
100 YD. I.M.			
ROBERT WATKINS	48 PNA	1:15.80	
ROBERT GRIFFITH	48 PNA	1:23.71	
MEN 50-54			
500 YD. FREE			
LEE CARLSON	50 PNA	6:52.43	
100 YD. BACK			
LEE CARLSON	50 PNA	1:17.03	
50 YD. BRST			
WALT REID	50 PNA	34.22	
LEE CARLSON	50 PNA	39.61	
100 YD. BRST			
WALT REID	50 PNA	1:17.99	
200 YD. BRST			
WALT REID	50 PNA	2:53.21	
100 YD. I.M.			
LEE CARLSON	50 PNA	1:19.08	
MEN 55-59			
50 YD. FREE			
DAVE DRUM	55 SDSM	26.96	
BOB DORSE	59 PNA	27.94	
MILES YANICK	55 PNA	32.33	
DAM NELLIS	59 SQM	32.56	
JACK LYNCH	55 PNA	45.31	
100 YD. FREE			
DAVE DRUM	55 SDSM	1:02.51	
BOB DORSE	59 PNA	1:05.90	
MILES YANICK	55 PNA	1:15.81	
DAM NELLIS	59 SQM	1:16.71	
JACK LYNCH	55 PNA	1:43.65 U	
200 YD. FREE			
DAM NELLIS	59 SQM	2:55.20	
100 YD. BACK			
TOM FOLEY	56 PNA	1:38.17	
JACK LYNCH	55 PNA	2:06.19	
50 YD. BRST			
FLOYD GELLER	57 OREG	44.64	
100 YD. BRST			
FLOYD GELLER	57 OREG	1:44.20	
200 YD. BRST			
FLOYD GELLER	57 OREG	4:00.47	
50 YD. FLY			
DAVE DRUM	55 SDSM	29.21	
200 YD. FLY			
TOM FOLEY	56 PNA	3:49.24 U	
100 YD. I.M.			
DAVE DRUM	55 SDSM	1:10.53	
BOB DORSE	59 PNA	1:17.34	
TOM FOLEY	56 PNA	1:32.70	
MEN 60-64			
50 YD. FREE			
RALPH BREMER	61 PNA	36.82	
WILLIAM HUMPHRIES	62 PNA	37.51	
100 YD. FREE			
RALPH BREMER	61 PNA	1:24.16	
500 YD. FREE			
RALPH BREMER	61 PNA	7:59.86	
50 YD. BACK			
WILLIAM HUMPHRIES	62 PNA	46.11	
100 YD. BACK			
WILLIAM HUMPHRIES	62 PNA	1:50.77	
100 YD. BRST			
RALPH BREMER	61 PNA	1:49.41	
50 YD. FLY			
WATSON LAWRENCE	63 SQM	1:00.49	
100 YD. FLY			
WATSON LAWRENCE	63 SQM	2:34.20	
400 YD. I.M.			
WATSON LAWRENCE	63 SQM	10:43.84	

MEN 65-69			
50 YD. FREE			
ALAN SANDERS	67 PNA	34.67	
100 YD. FREE			
ALAN SANDERS	67 PNA	1:20.58 U	
200 YD. FREE			
ALAN SANDERS	67 PNA	3:08.66	
50 YD. BACK			
ALAN SANDERS	67 PNA	49.32	
MEN 70-74			
50 YD. FREE			
BOB LITTLEJOHN	71 SQM	39.05	
200 YD. FREE			
BOB LITTLEJOHN	71 SQM	3:44.20	
50 YD. BACK			
GERALD HUESTIS	70 OREG	36.95	
100 YD. BACK			
GERALD HUESTIS	70 OREG	1:24.61 R	
200 YD. BACK			
GERALD HUESTIS	70 OREG	3:05.16 R	
MEN 75-79			
50 YD. FREE			
ALLAN DE LAY	75 OREG	34.45 U	
50 YD. BACK			
ALLAN DE LAY	75 OREG	50.48	
50 YD. BRST			
ALLAN DE LAY	75 OREG	50.44	
MEN 80-84			
100 YD. FREE			
JIM PENFIELD	82 PNA	1:34.68	
100 YD. BACK			
JIM PENFIELD	82 PNA	1:55.77	
200 YD. BRST			
JIM PENFIELD	82 PNA	4:33.89 R	
RELAYS-MEN 200 YD. FREE			
25 +			
GEOFFREY ANDERSON	30 PNA	1:46.62	
LARRY DE GROEN	29		
TOM HARRYLOCK	29		
ROBERT GRIFFITH	48		
RELAYS-MEN 200 YD. MEDLEY			
25 +			
CLIFFTON WARD	34 PNA	1:56.28 U	
STEVEN PETERSON	44		
JAY GILLEN	25		
M. FITZGERALD	32		
RELAYS-MIXED 200 YD. FREE			
25 +			
GEOFFREY ANDERSON	30 PNA	1:53.59	
LARRY DE GROEN	29		
DEBORAH LADD	31		
LESLIE BARBITT	37		

4000 Individual Medley 1990			
Women's			
30-34	Nanci Sirois	32	57:30.87 R
50-54	Roberta Boberski	50	1:13:56.81 R
	Karen Forfar	53	1:25:59.00
Men's			
30-34	Andrew Donato	33	1:06:30.68
35-39	Marshall Baekeroot	38	1:04:11.00
40-44	Daniel Rogacki	43	58:37.04 R
	Mark E. Barnhart	44	1:06:42.57
	John Munro	42	1:10:50.28
50-54	Carl Woolley	54	1:03:33.00
55-59	Nicholas Berenyi	58	1:11:37.65
75-79	John Johnston	75	1:24:43.34 R

Ban on radical swimsuit baffles designer

A CONTROVERSIAL Australian-designed swimming costume has been banned by the sport's governing body, the Australian Olympic Committee. The ban is based on the swimsuit's design, which is said to be "aerodynamic" and "streamlined". The ban is based on the swimsuit's design, which is said to be "aerodynamic" and "streamlined".

Lawson said the decision was a huge disappointment. "There is a fine line between aiding and abetting a swimmer's performance and using a swimsuit that is a radical departure from traditional nylon lycra." Lawson said the decision was a huge disappointment. "There is a fine line between aiding and abetting a swimmer's performance and using a swimsuit that is a radical departure from traditional nylon lycra."

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on Elbows and Sculling

Introducing the 1/2 stroke freestyle drill

by Stacy Jones

It's that time of year again. Time for coach to pull out his latest and greatest intense sets and unleash them on his unsuspecting swimmers. It is at this time that we begin to forget all of the good habits and stroke techniques we learned in the fall in order to get through that gnarly set of 100's, thereby erasing three months worth of stroke development work. The most common victim of this crime is the freestyle.

Your freestyle may feel fine, and it may look fine (to the untrained eye), but it is possible that you're not getting the most power out of it that you can. One way to find out if you can improve it, is to ask yourself the following questions while you swim a moderate 100 freestyle. (It may be helpful to have someone on the deck answer them for you.)

1) When my hand enters the water, and I begin my inward scull, where is my elbow in relation to my shoulder?

2) When I perform the inward sculling motion in my stroke, where does it begin? - (i.e. Where is my hand positioned?) Where does it end? What position is my elbow in while I scull?

3) How propulsive is this phase of my stroke?

Okay, now it's time to compare your answers with the following CORRECT responses.

1) When your hand enters the water, your elbow should be held slightly higher, or even with, your shoulder. Your arm will then be in the best position for an optimal inward scull.

2) Your inward scull should begin at about eye level, and as your hand travels down your body, your elbow should remain high until you finish that scull at (or slightly above) your belly button. From there, the hand should turn out and finish the stroke.

3) The inward scull should be one of the most powerful phases of your stroke, yet unfortunately, many swimmers let their hands follow the "path of least resistance", created when the elbow is dropped early, which then tends to "lead" the hand through this

phase. This considerably decreases forward propulsion, which in turn creates a slower, less efficient stroke.

If, after answering these questions, you feel that you aren't getting the most power out of your freestyle stroke, don't despair! There is an excellent drill that will help you "increase your freestyle productivity". It is known as 1/2 Stroke Freestyle.

Start on your right side, using a flutter kick. Keeping your left arm at your side, perform just the inward scull portion of your stroke. Your hand should never go past your navel. (Hint: This motion will feel more like a one-armed breaststroke than freestyle.) You can breathe to the side, or forward, and as often as you like. I have found that the sculling motion actually pops my head out of the water, so I breathe with every stroke/scull. The point of this drill is to keep your elbow up, and to get a feel for the power that this motion can generate. When you have mastered the right arm, try it on your left side. (This side may seem very uncomfortable at first, but you'll soon get the hang of it. (Hint: You know you're doing it right if you start to feel fatigue and/or pain in your triceps and pectorals.)

When you have conquered the mechanics of the drill on both arms, try to incorporate it into your freestyle. The change may feel dramatic, and you may fatigue quickly after swimming with the new technique. Unfortunately, there is no getting around the pain. You are using muscles that haven't been used extensively, so it may take a while for them to adjust, you need to swim through it, and keep concentrating on the scull, because as yardage and intensity increase (as they do at this time of year) you will need to be used to your new and improved freestyle.

Stacy Jones swims for H2Ouston Swims and is a National Record holder who continually looks for ways to improve her technique - and is not above sharing her experiences with others.

Reprinted from GULF MASTERS Newsletter

Swimming in France

by Tania Vandenhouten

After a week in Paris I discovered many options for the "international" or France bound swimmer. Age group swimming in Paris is quite similar to that in the States. However, the students in the Lycee (high School) attend classes from 8-noon and 2-6pm generally. The French government believes that its education system (LE BAC) is superior to others in Europe. This belief creates a problem for students who also want to be involved with athletics. The coaches of the Age Group teams and the Swimming Federation try to make special arrangements with the schools to let students out to train. Once a student is able to train, they also have double workouts and lift weights 3 days a week as our age group swimmers do.

Unfortunately, unlike the States, not every swimmer may swim in University. Throughout France there are only 5 Universities where students may study and train at the same time. In order to swim at one of the Universities a swimmer must meet the qualifying times. In a sense, it's like making the qualifying times for scholarships at our Universities in the states. There are no scholarships at the Universities in France since the education is already paid for by the governments. The swimmer who does not make University qualifying times may not be a "walk on". However, they may continue at clubs such as "Le Racing Club de France" or other clubs around the country.

In fact, I was more than welcomed to swim with the Age Group Swimmers, but it would limit other possible experiences my junior year in Paris such as "Caje's" and traveling.

Master Swimming is still a relatively new and developing idea to the French. It started about 5 years ago, but there are not many "teams." Many of the Masters swimmers train on their own. The Racing Club of France has a Masters team in Paris that practices 4 evenings a week for an hour from 8:30-9:30 for those of you Master Swimmers with travel plans to Paris.

The majority of athletes in France end their careers at the age of 25. Interestingly enough, those athletes that train after 25 are usually people continued on next page

who never had the opportunity to be athletic when younger. The French have a more relaxed attitude about sports than the Americans. It is easier to find the French riding horses or sailing. Intensive training for older people is still a new idea for the French, and, as of now, is more accepted in the American mentality.

For those who want to train in France, it is possible but the relaxed attitude of the country and the bread and wine entails that much more motivation on the part of the athlete.

The Master meets have the same age groups as the U.S. - 25-29 etc., and have Nationals in the winter and spring. Last year's "Championats" for Masters were held in Vicky.

Hope to hear from you! I LOVE getting mail.

Enter Zoomers. Put these little babies on and here's what happens: You work a little harder with your bottom half and YOU GO FASTER. Not a lot faster like with regular flippers. But enough faster to justify the extra effort AT THAT MOMENT. You are using more muscle fibers (up to 60% more) and spreading the workload out over a larger muscle mass. This allows you to burn more carbs and oxygen, producing greater force and increasing cardiovascular output. This level of exertion increases the length of recovery time following a workout, keeping the metabolism in "high gear" for a longer period after workout.

Zoomers shorten the learning curve for fast swimming. When you swim fast you experience different body positioning, streamlining, armstroke entry, kick size and speed, arm speed etc. By allowing you to spend more time swimming fast you learn these sensations and skills faster. And, so far, the experience we have had indicates that much of what swimmers are learning with the Zoomers is retained or reproduced when they take them off.

To make a long story short, Zoomers do not make workout easier. They make doing hard work more fun and provide the necessary "instant gratification" (that we are all accused of needing so much of these days) to spur you to want to do more harder, faster swimming. We encourage our swimmers to wear their Zoomers through large portions of the workouts - for sprint work as well as for distance work. They seem to like it and they keep working harder and swimming faster. Sounds like a Win/Win proposition to me (also very "in" these days).

EXCITING TRAVEL PACKAGES FOR TWO EXCITING SWIM EVENTS IN 1991

Ponte Vedra Travel has a great tour planned for the PAN PACIFIC MASTERS Aquatic Games to be held in Tokyo, Japan on July 12-17. Like in Rio, they have addressed the principal concern about Japan - price. Ponte Vedra Travel & Associates package hotel, the Kieo Plaza, is close to the pool, just minutes away by transfer and is the headquarters hotel of the Championships. They have included Championship Registration and Entry Fees, all transfers, all the special events, a city tour to be taken at your convenience and they will be there to make sure their swimmers get to know Japan and do so at a very moderate price. They believe they can show us swimmers a Japan we will love and in addition to all those medals, records and top ten rankings that we bring home, we will also bring home a lot of great memories. The meet will be held at the Yogogi National Sports Complex, built for the 1964 Tokyo Olympics and site of the 1986 Masters World Swimming Championships. Within a block, a cup of coffee can go from \$9.00 to \$.75 and back again. They have several Excursions after the meet - one is Affordable Hong Kong (4 days/3 nights) for \$399.

And then there is BARBADOS - Masters International - Short Course Meters. The meet will be held in the new \$2 million Aquatic Center - October 2-8, 1991. It is a magnificent 50 x 25 meter pool with a 25 meter 4-lane teaching and warm-up pool. There will be swimming events, one or more ocean swims, water polo, special relay events and most important of all, fabulous Bajan food.

Please call George Koski at 1-800-833-SWIM for more information or brochures.

FROM THE EDITOR

Remember, SWIM-MASTER will be retired at the end of this year! Twenty years is a long time and hopefully, the needs will be met by someone. Just in case you wish the remaining issues, the following price list is made available.

CODE #	USA	FOREIGN
391	\$ 6	\$ 10.50
491	\$ 5	\$ 9.00
591	\$ 4	\$ 7.50
691	\$ 3	\$ 6.00
791	\$ 2	\$ 4.00
891	\$ 1	\$ 2.00

Did you know...

Swimming is the most popular sport - A study by Mediamark Research Inc. found that 25% of US adults went swimming in the past year, making it the most popular participation sport by far. Swimming beat out fishing 18%, cycling 17%, bowling 14%, golf 10%, boating & basketball 9%, softball & jogging 8% and tennis 7%.

Swimming World

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LIFETIME VIGOROUS SWIMMING FOR FUN, SPORT AND HEALTH

SWIM CALENDAR

VOL XX No 3

MAR-APR 1991

- MAR 15-17 SCY - Tom Harmon, 2806 Atlantic Ave., Ft. Pierce, FL 34947
16 SCM - Kathy Keffer-Sharpe, 3002 N.W. 14th, Oklahoma City, OK 73107
16 SCY - Bangor, Washington
16-17 SCY - Dynamo - Lisa Watson, 804 Howell Ct, Duluth, GA 30136
17 SCY - Michigan Masters - Charles Enright (517) 832-9628
17 SCY - RPI Spring Frolic, Dan McMahon, 2E Circle Dr., Rensselaer, NY 12144
23-24 SCY - Larry Wood, 9722 Mackworth, Stafford, TX 77477
23-24 SCY - Greensboro, NC - Contact Maury Schott at 919-855-8715
24 SCY - Tracy Rossa, c/o S.H.A.P.E. Facility, Johnson State College, Johnson, VT 05656
24 SCY - April Fools - Bob Kane, 21 Wixted Ave., Danbury, CT 06810
30 SCM - SDI, 1135 Garnet-K, San Diego, CA 92109

- APR 5-7 SCY - St Petersburg, Fl - John Bishop, 4717 Overlook Drive N.E., St. Pete FL 33703
5-7 SCY - Oregon Masters Association Championships - Newberg, Or
6 SCY - Barrington Masters - Irene David (708) 382-4982
6 1000/1650 - Barbara Protzman, 7919 Main Falls Cir, Catonsville, MD 21228
6-7 SCY - Brian Cooley, 6005 Riedgecrest Way #202, Ft. Worth, TX 76132
6-7 SYC - Pieter Cath, 35400 Bainbridge Rd., Solon, OH 44139
12-14 SCY - PNA Champ - Hugh Moore, 29920 2nd Place SW, Federal Way, WA 98023
12-14 SCY - Colonies Zone - Gus Langer, PO Box 222, Milford, CT 06460
13 SCY - Senior Games (55 & over) Delray Beach Patrol, 2 S.Ocean Blvd, Delray Bch, FL
13-14 LCM - Puerto Rico Masters, 2058 Espana St., Santurce, PR 00911
13-14 SCY - Michigan Masters State Meet - John Howsen (616) 345-9622
13-14 LCM - Puerto Rico Masters Swimming, 2058 Espana St, Santurce, PR 00911
14 SCY - SDI, 1135 Garnet-K, San Diego, CA 92109
20 SCY - Pentathlon - Sam Seiple, 111 N Post Oak Lane, Houston, TX 77042
26-28 SCY - Randy Hair, 3105 N. 7th, Coeur d'Alene ID 83814
26-29 SCY - YMCA MASTERS NATIONAL CHAMPIONSHIPS, Indianapolis, IN
27 SCY - York Masters - Cal Schaffer, 2826 Eastwood Dr., York, PA 17402
27-28 SCY - SPMA - Robert Mitchell (714) 581-1135

- MAY 4 SCY - Barbara Flanagan (918) 743-8474 - Tulsa, OK
11 SCY - Tigard, Oregon - Age Group Invitational with Masters
19 SCY - SDI, 1135 Garnet-K, San Diego, CA 92109

NATIONAL AND INTERNATIONAL

- MAY 16-19, 1991 USMS SC NATIONALS, NASHVILLE, TN Mary Lee Watson, 6613 Rolling Fork Drive, Nashville, TN 37205 (615) 353-1632
JUL 11-17, 1991 4TH PAN PACIFIC MASTERS SWIMMING CHAMPIONSHIPS, TOKYO JAPAN
JUL 18-22, 1991 4TH PAN PACIFIC MASTERS WATER POLO & SYNCHRONIZED SWIMMING CHAMPIONSHIPS, GUAM
AUG 15-18, 1991 USMS LC NATIONALS, ELIZABETHTOWN, KY -Cy Cyganieweiz, 206 S. Miles, Elizabethtown, KY 42702
SEP 18-22, 1991 USMS NATIONAL CONVENTION, LOUISVILLE, KY
JUN 27-JUL 5, 1992 4TH WORLD MASTERS SWIMMING CHAMPIONSHIPS, INDIANAPOLIS, IN USA
Heidi Neuburber, 901 W New York St, Rm 204, Indianapolis, IN USA
JULY 1993 THIRD WORLD MASTERS GAMES - 1993 Secretariat, World Masters Games III, PO Box 65708 St. Paul, MN 55165-0708