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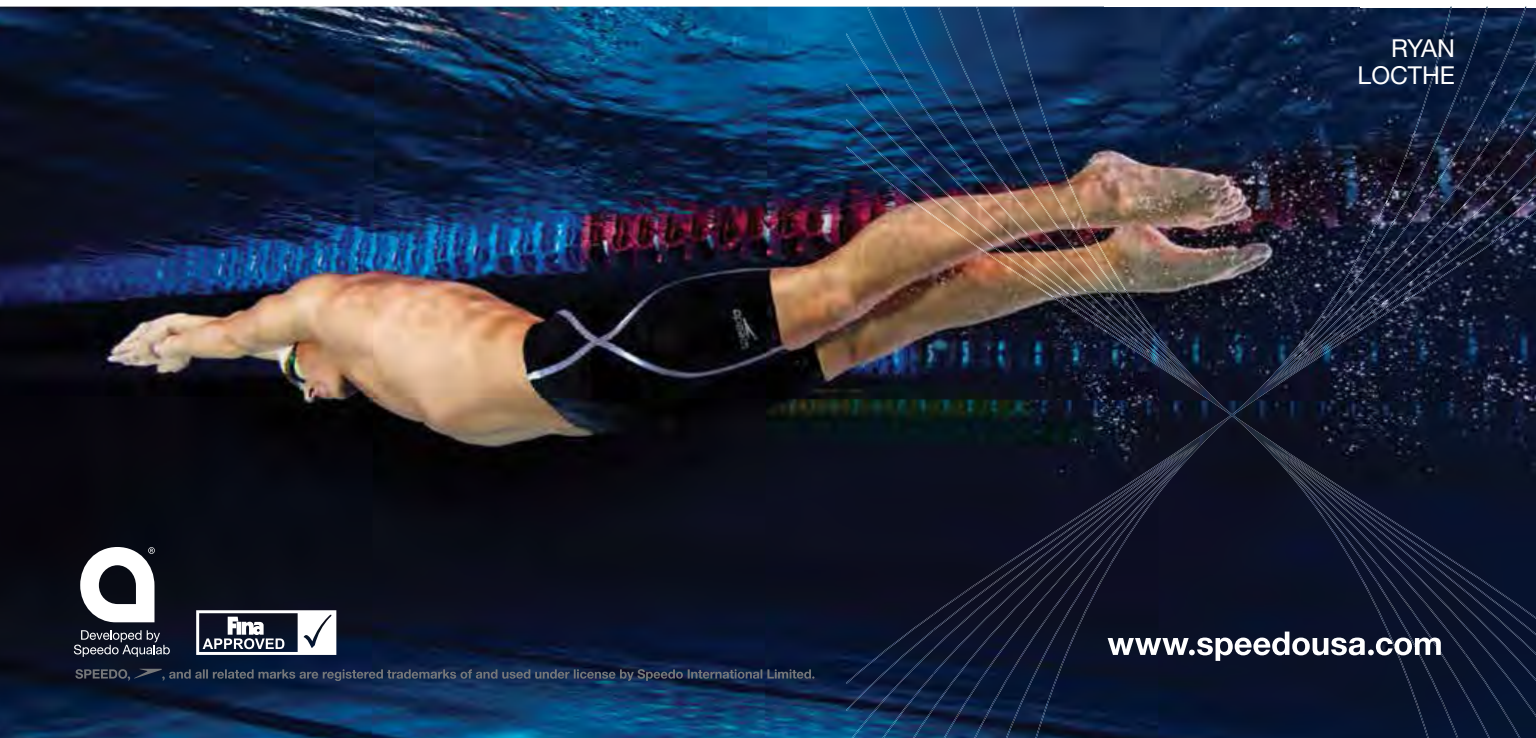
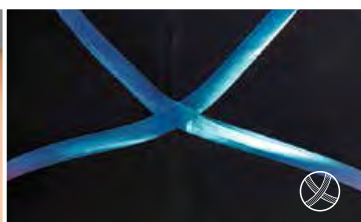
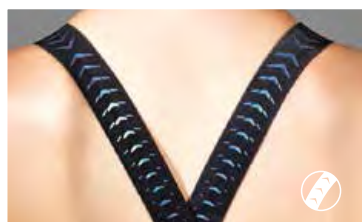
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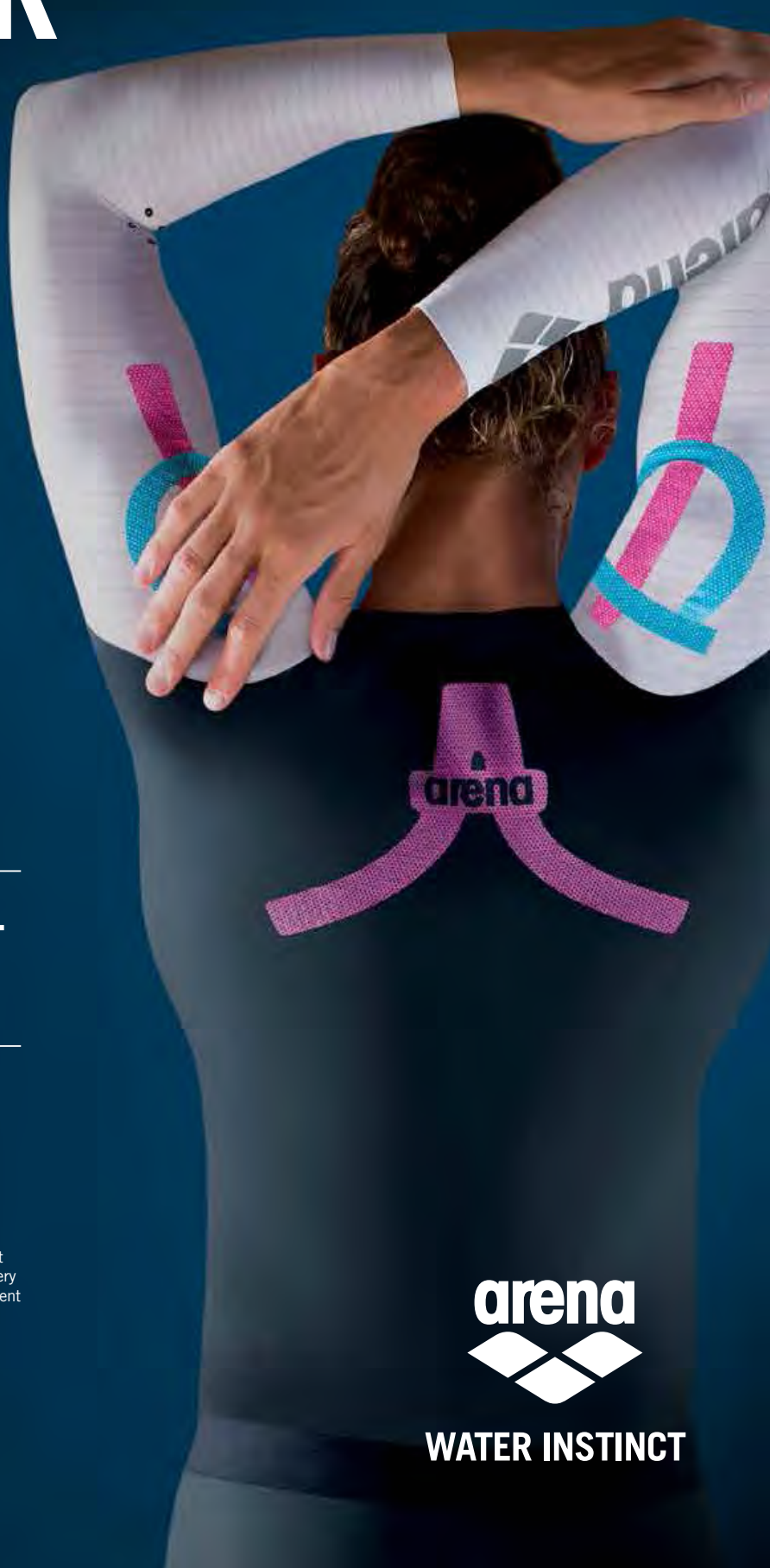
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by Annie Grevers
Last year, 21-year-old Kelsi Worrell broke American records, led Team USA at the Pan-American Games, and was even part of a world record-setting relay! She couldn't have asked for better timing to have such a breakout year...especially with Rio on the horizon.

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ON THE COVER

At last year's NCAAs, University of Louisville's Kelsi Worrell became the first woman in history to break 50 seconds in the 100 yard butterfly—and she did it twice! After breaking Natalie Coughlin's 13-year-old American record (50.02) in prelims with a 49.89, Kelsi (now a senior) won finals in 49.81. With the butterflyer's career blossoming—two gold medals and a silver at last summer's Pan-Am Games plus being a part of a world record-setting relay at December's Duel in the Pool—the 21-year-old's sights are now set on making the U.S. Olympic team. (See story, page 26.)

[PHOTO BY PETER H. BICK]



**CUSTOM
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SWIMWEAR



SWIMMING IN MEMOIRS

BY CASEY BARRETT

The athlete memoir can be a dubious genre. Usually, it comes on the heels of some mighty achievement or as a swan song to a proud career. Sometimes it celebrates eccentricity (See Rodman, Dennis) or conquered demons (Agassi, Andre), but regardless of the athlete or the sport, the prerequisite is that said athlete/author must be a champion with a story.

So it is with the subgenre of swimming memoirs. Over the last 16 years of this century, we've seen a small library of swimmer stories—from a shelf filled with Michael Phelps (*No Limits: The Will to Succeed; My Story; The Untold Story of a Champion; Beneath the Surface; The Unparalleled Olympian...* the list goes on) to tomes devoted to female swimmers who have overcome a variety of obstacles—from age to eating disorders to injuries to drug tests. These include Dara Torres' *Age Is Just a Number*; Amanda Beard's *In the Water They Can't See You Cry*; Natalie Coughlin's *Golden Girl*; and most recently, Jessica Hardy's *Swimming Toward the Gold Lining*.

Each Olympics guarantees more to come. Missy Franklin already has a documentary under her belt; a post-Rio book seems a given. Much as we'd love to read one from Katie Ledecky, that will likely have to wait until after she turns pro—a prospect that may be irresistible by next fall should Ledecky deliver as *the* story of the Games.

But how much can one really learn from a memoir penned by an athlete still in his or her 20s? As inspiring as their athletic successes may be, their dryland lives tend not to be all that riveting. In fact, it's almost a given—a drama-filled life swirling around the Olympics is hardly the ideal preparation.

This spring, there will be a new entry in this swimmer's library: Anthony Ervin's *Chasing Water: Elegy of an Olympian*, penned with friend and former Co-

lumbia University swimmer, Constantine Markides.

Like Torres, Ervin has a story with some aged perspective to tell. Unlike Dara's *Age Is Just a Number*, his target readership is probably not suburban soccer moms. But for those interested in the demons and hard truths that can arrive after the national anthems end and the medals are tucked away, this is a story worth diving into.

You'll find the golden inspiration around the halo of the Games, just as you will in the rest of the genre. But then you'll find yourself inside tattoo parlors, racing on fast motorbikes, flailing away on guitars in dingy downtown Manhattan studios. You'll find an Olympic champion who was once remembered as much for abandoning his talent—before he found it again, and returned a decade later to reclaim his status as the fastest man through water.

Ervin's story isn't over. At the 2014 U.S. Nationals, he was the oldest competitor at the meet—where, at 33, he won the national title in the 50 free. This summer in Omaha, he'll once again be in the Trials mix as he seeks to make a third U.S. Olympic team—16 years removed from his first one, back at the 2000 Games in Sydney, when he and Gary Hall Jr. famously tied for gold in the 50.

These exploits in the pool are plenty exciting—indeed, there wouldn't be a book without them—but it's the life led out of chlorine that's the real story. Despite what you see on the surface-deep Olympic broadcasts, the lives of swimmers are often more than merely training and dreaming, eating and sleeping.

Just let Anthony Ervin tell you his story... ❖

Casey Barrett
Senior Commentator



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LESSONS with the LEGENDS

PETER DALAND

USC LEGEND
PETER DALAND

THIS MONTH, *SWIMMING WORLD* ASKED SOME OF AMERICA'S MOST DISTINGUISHED AQUATIC VOICES TO RECALL THE CONTRIBUTIONS OF PETER DALAND.

BY MICHAEL J. STOTT

The following are excerpts from personal perspectives, and in some cases, lengthy tributes recounting what Coach Peter Daland meant to them and the sport of swimming in general.

JOHN LEONARD

Executive Director, American Swimming Coaches Association

"Peter Daland—COACH Daland to everyone at all times, in my memory—was one of the giants in our sport. He championed the concept of a coach being involved in world-class coaching, administration and decision making in all aspects of swimming from the AAU to USA Swimming to the NCAA. ASCA provides an award in his name for World-Class Coaches who are similarly invested.

"While at Yale with Coach Bob Kiphuth, he began *Swimming World* and *Junior Swimmer* to promote our sport at a time when no other vehicle was around to do that. His dedication to coach education was life-

long, and he began, among others, several great coaching clinics—such as the Eastern and Central States Clinics that continue to this day.

"Coach was a mentor to every great young coach who came along, and he went out of his way to congratulate them on their ascension to the national scene. His conversations on swimming were legendary and frequently bordered more on 'interrogations' than conversations since he was so interested in what his subject had to say. He was stupendously well-read—especially on history, geography and international relations—and had friends and colleagues worldwide. Coach was a great intellect and a wonderful friend. I miss him daily.

"Richard Quick and Mark Schubert were his two favorite 'sons' because they did everything 'correctly,' and George Block and I were his two 'problem children' who he was continually trying to bring to a 'better way of doing things.' We all owe him SO very much."

— continued on 12

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PICTURED > As a coach and aquatic trustee, Peter Daland (April 12, 1921 - Oct. 20, 2014) was a pillar of American and international swimming. Harvard and Swathmore-educated, Daland learned his craft from Yale's legendary Bob Kiphuth before migrating to the West Coast and building national powerhouses at the Los Angeles Athletic Club and the University of Southern California. He is the only coach to have won all three major national team championships—nine NCAA, 14 national AAU men's and two national AAU women's. As the men's coach at USC, his teams finished first or second at Division I NCAAs 21 times and the top ten 31 times in 35 years (1958-92). His athletes corralled 93 NCAA individual and relay titles, ending with a 318-31-1 dual meet mark. His Trojans won 17 Pac-10 conference titles.

Of perhaps even greater importance was his influence outside the Golden State. He was the U.S. Olympic coach for women in 1964 (15 of 24 medals) and men in 1972 (26 of 45) and produced 62 Olympians. He was a member of the 1984 Olympic Organizing Committee and was the competition chairman for swimming events at the 1984 Games in Los Angeles.

Administratively, Daland was the longtime swimming chairman for the World University Games and served as the U.S. delegate to FINA in 1991 and 1995. He also was the president of the American Swimming Coaches Association, a member of the Speedo International Advisory Coaches Board and organized clinics in 40 countries.

Coach Daland was recognized by peers throughout his career and was named national coach of the year six times by various organizations. A founder and longtime board member of ASCA, he received the organization's Bob Ousley Award for outstanding service (1992). He was similarly honored by the AAU and CSCAA. He resides in the ISHOF (1977) and ASCA (2002) Halls of Fame.

A gentleman and a scholar, Daland was co-founder of *Swimming World Magazine*, along with Robert J.H. Kiphuth. In 2009, with editorial assistance from Phillip Whitten, he authored "The History of Olympic Swimming, Volume One: 1896-1936."



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JOHN NABER

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“Coach Daland was a founding father of the modern sport of swimming. His academic studies and his statistical analysis, along with the founding of *Swimming World Magazine*, speaks volumes about his influence on the sport.

“My freshman year, he predicted that USC could beat a heavily favored Indiana University by one point. Final score: USC 339, Indiana 338. In addition to his mastery of the sport’s statistics, he also was familiar with the personal and academic lives his swimmers led. He was always able to name the athletes’ majors of study and how well they were doing in school.

“Coach Daland was a master at his craft. He knew what to say to each swimmer in order to get them to work as hard as they were capable. He had a policy of daily addressing each swimmer by name. He kept a professional distance from his swimmers, which resulted in a higher level of respect. His teams NEVER threw him into the pool after winning a national championship.

“I also appreciated his wry sense of humor. When a team member climbed into the rafters during a team meeting, Coach Daland refused to acknowledge it.

“Most of his swimmers can recall verbatim his phrases about success in life. Some were:

- ‘Ticky Tocky goes the clocky’
- ‘Lateness will not be tolerated’
- ‘You are one haircut away from success’
- ‘This team has no superstars, just squad members.’

“Coach had a reverence for the sport’s history. Whenever an alum visited the program, swimming would halt so that Coach could make the introduction.

MARK SCHUBERT

Coach Daland’s Successor at USC
8-time Olympic Coach
U.S. National Team Director

“He was a tremendous team coach, uniting people for a common purpose and getting them to perform well for themselves and the group. He was a resource for me when I first got the job at Mission Viejo and later at USC. He was also a great encourager. A few words from Peter Daland such as, “You are doing a great job,” meant the world to me.

“He was always up on the issues. He served as the chairman of the coaches’ commission at FINA and pushed a lot of agendas that helped the United States and the swimming world in general.

“He loved and encouraged walk-ons because they contributed the most in later years. He was great in giving swimmers a chance to make the team and ran a workout for the varsity guys and one for the others. He would stick walk-ons in dual meets, and they were very proud of that.”



Coach Peter Daland welcomes some of his former swimmers to his home in August 2013: (from left) Mike O'Brien, Steve Pickell, Mike Nyeholt, Rod Stewart, Bruce Furniss and John Naber.

[PHOTO BY INGRID DALAND]

“Coach Daland was a founding father of the modern sport of swimming. His academic studies and his statistical analysis, along with the founding of *Swimming World Magazine*, speaks volumes about his influence on the sport.”

— John Naber, USC '77

EDDIE REESE

6-time Olympic Coach
38th Year as Men’s Coach at the University of Texas

Reese won his first six NCAA titles with Daland’s USC squad coming in second three times.

“He was a gift to the swimming world. He was first-class all the time and smart about people. I learned a lot from him. His teams were always hard to beat.

“I stood next to him at the 1972 NCAA

Championships at West Point when Frank Heckl, 1970 200 IM champion, failed to finish in his event. Heckl was the typical USC athlete—you had to beat them because they never beat themselves. Peter said to him, ‘Frank, you can accept this, or you can go out and swim like the swimmer you are.’ That’s strong in my memory.” (Heckl finished the meet with five All-American citations).

FRANK HECKL

20-time NCAA All-American
Now an Orthopedic Surgeon in New Mexico

“I don’t remember the conversation at all. I do remember tearing a rectus muscle in warm-up, and the butterfly really hurt.

“We actually won the swimming competition that year, but Indiana’s divers (47-0) put them over the top (390-371). Coach said, ‘Isn’t it a shame diving isn’t a part of gymnastics?’

“He told me I was one of the best relay swimmers USC ever had, and that was really important to me.

“When my second child was born, I considered naming her Allison Daland Heckl, but my wife vetoed that.

“He was an impressive guy.”

STEVE PICKELL

7-time NCAA All-American
2-time Canadian Olympian
Head Coach, SOCAL Aquatics

“(About a year before Peter died), Coach Daland’s wife, Ingrid, called John (Naber) and Bruce (Furniss), and told them Peter’s Alzheimer’s was getting worse, and if we wanted to see him when he could still remember us, we should come and see him.

“We had scheduled just to have lunch with him and Ingrid at his retirement village, but we ended up staying four hours. Coach was as sharp as a tack, recalling meets and races with detail and giving us the business regarding our weight or hair! It was one of the best afternoons of my life.

“Besides my dad, no man influenced me more than Coach Daland. I am positive I would not be where I am today without Coach Daland. Swimming fast was only a small part of the gift he gave all of us.” ♦

Michael J. Stott is an ASCA Level 5 coach whose Collegiate School (Richmond, Va.) teams have won eight state high school championships.

IN-SEASON, RACE-SPECIFIC SETS

BY MICHAEL J. STOTT

Championship swimmers are constantly pushing limits. Phrases such as “Getting comfortable with being uncomfortable” and “Do this one all out” are challenges to one’s physical stamina and mental fortitude. Following are four sets designed to help swimmers “get better.”



[PHOTO BY PETER H. BICK]

UNIVERSITY OF TEXAS SETS

Coach Eddie Reese: “Both of the following sets are designed to produce plenty of lactate. Six weeks out from NCAAs, we drop the set to three rounds of 500s. Four weeks out, we drop to two rounds and do them with competition suits on (like they would wear in a championship meet)—and get some very impressive swimming.”

Set #1: Mid-Distance and Distance Athletes (200 fliers, 400 IMers, 500 and 1650 yard freestylers)

4 Rounds—all done freestyle:

- 4 broken 500s
- 200 @ 2:20
- 2 x 100 @ 1:10
- 2 x 50 @ :45

To be done as follows:

- #1—plus 10 seconds on best 500 ever
 - #2—even with best 500
 - #3 & #4—better than best 500
- [Seven minutes rest between rounds]

Set #2: Sprinters, 200 backstrokers, 200 breaststrokers

4 Rounds—all done freestyle:

- 5 broken 300s (athletes know their 300 times)
- 150 @ 2:00
- 3 x 50 @ :45

To be done as follows:

- #1-3—descend (#3 has to be best ever)
- #4 & #5—“has to be REAL GOOD”



SANTA CLARA SWIM CLUB SETS

Coach Allison Beebe: “These two sets focus on breathing patterns and racing strategies. I tweaked this first one from a set that Jon Urbanek gave me for 500 swimmers. We do between two and six rounds of this, depending on the time of the year. I really like this set because I can remind the swimmers about breathing patterns and race strategies while they are doing the broken 500.”

Set #1

- 1 x 100 @ 1:20 (from a dive, finish to the feet)
- 6 x 50 @ :40 (to the feet)
- 1 x 100 fast to the hands

(Added up should be under best 500 time)

Set #2

Coach Allison Beebe: “Similarly, here’s a set for the 200. We do between two to four rounds of this, depending on the time of the year. This set also allows me to constantly remind swimmers of things to do within each segment of the race. At various points in these sets for 200 and 500 swimmers, I reinforce proscribed kick counts.”

- 1 x 50 @ :45 (freestyle) or :50 (stroke/IM) (from a dive)
- 1 x 100 fast @ 1:20 (freestyle) or 1:30 (stroke/IM)
- 1 x 50 fast

(Added up should be under best 200 time) ❖

SWIMMING TECHNIQUE MISCONCEPTIONS:

INDIVIDUAL DIFFERENCES

BY ROD HAVRILUK

Many people believe that it is worth copying the technique of the fastest swimmers. In reality, even the fastest swimmers have technique limitations, but they offset them with strength and conditioning. The purpose of this series of articles is to address scientifically the technique misconceptions that have become “conventional wisdom,” and to present options that are more effective.

A common misconception is that each swimmer's technique is optimized on an individual basis. The concept of “individual differences” explains variability in human behavior and that each individual is, indeed, unique. However, it is a misconception that a swimmer will optimize performance with unique technique elements. Optimal performance depends on technique elements that are consistent with established scientific principles, not merely “individually different.”

INDIVIDUAL DIFFERENCES IN TECHNIQUE

Video analysis shows that every swimmer has a different combination of technique elements. For example, the three freestylers in **Fig. 1 (below)** have remarkably different arm positions as the arm passes under the shoulder. A force analysis clearly identifies individual limitations from those technique differences.

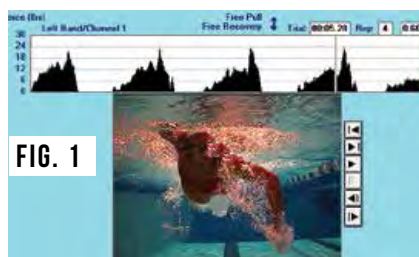


FIG. 1 > (ABOVE) These images show three female freestylers and the force curves for their left hand. The vertical gray line on the force curve is synchronized with the video image.

Conventional wisdom about the individuality of technique is prevalent. The title of a recent presentation, “Why Phelps’ Freestyle Works for Him” (Bowman, 2015), suggests that individuality is a positive attribute. As shown in **Fig. 2 (opposite page, top left)**, Phelps’ arm coordination may be unique, and in a sense “works for him” (given his performances). However, by virtue of his bilateral difference, it is clear that the “individuality” of his technique cannot optimize performance.

Unfortunately, individualized approaches to improving technique prolong the skill mastery process as explained in Methods 1, 2 and 3 in the following “Technique Models.” A more effective process based on science is explained in Method 4.

TECHNIQUE MODELS

1. A Technique Model for Each Individual. The “individual differences” misconception limits options for instruction. If the optimal technique for each swimmer is completely unique, then a coach has only one option for instruction: trial and error. For each technique element, a coach would have to experiment with adjustments to determine the optimal position and motion.

One obvious downside of a trial-and-error approach is that there are, inevitably, errors. Each error prolongs the time for a swimmer to master a technique element, and, consequently, delays improvement in performance.

2. A Technique Model Based on the Fastest Swimmers. A coach can take another approach and select one of the world’s fastest swimmers as a model for technique. While modeling top swimmers may reduce the number of “trials,” there



FIG. 2

FIG. 2 > (ABOVE, LEFT) The yellow line shows the position of one hand at the beginning of the pull, and the red line shows the position of the opposite hand. When the right hand begins the pull, the left hand has not yet begun the push (left image). When the left hand begins the pull, the right hand has almost completed the push (right image).

FIG. 3 > (ABOVE, RIGHT) This graph shows the variation of force with the angle of hand pitch as taken from six studies. The solid circles represent calculated force values from the study data. The dotted lines are the best-fit trends based on polynomial equations. The green box shows the range of greatest force.

FIG. 4 > (RIGHT) An optimal model for technique includes maintaining an angle of 70 to 75 degrees between the hand and the path of the hand through the water.

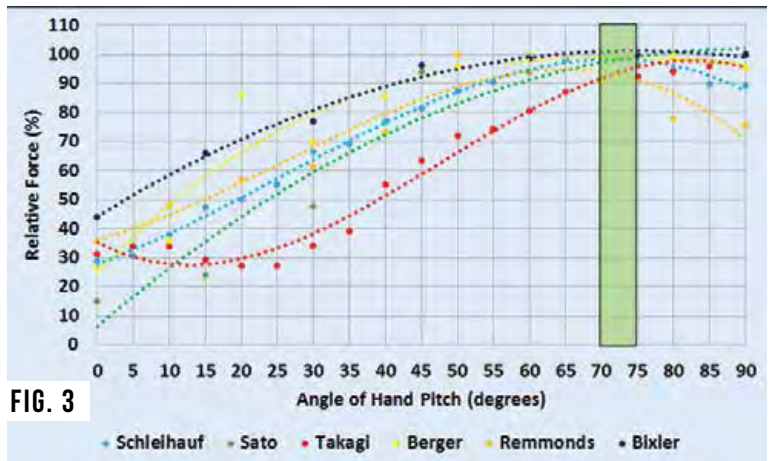


FIG. 3



FIG. 4

on a variety of swimming technique topics. For a number of these topics, there are multiple studies with considerable agreement.

would unavoidably and needlessly prolong the time to skill mastery.

4. A Technique Model Based on Science. Another option is for a coach to adopt a model based on science. Principles of physics such as the drag equation and the law of levers provide a scientific basis for optimizing technique. In addition, there are more than 50 years of research

For example, hand pitch (specifically, the angle between the hand and the path of the hand through the water) is one of the most researched topics in the sport. A number of respected scientists have examined how force varies with the angle of hand pitch. Even though these researchers used different experimental methods, there was remarkable consistency in the results. **Fig. 3 (top right)** shows the relative force by angle of hand pitch for six studies (Schleihauf, 1979; Sato & Hino, 2002; Takagi, Shimizu, Kurashima & Sanders, 2001; Berger, de Groot & Hollander, 1995; Remmonds & Bartlett, 1981; and Bixler & Riewald, 2002).

The overall results show that a hand pitch of 70 to 75 degrees generates the greatest force. A model based on science would include a hand pitch angle of 70 to 75 degrees throughout the stroke cycle to maximize propulsion (as shown in **Fig. 4, above**).

While a science-based model is universally appropriate for technique instruction, individual differences cannot be completely ignored. It is conceivable that some physical differences may call for subtle adjustments in the model. However, these individual differences are trivial compared to the benefit of complying with a science-based model. ❖

Dr. Rod Havriluk is a sports scientist and consultant who specializes in swimming technique instruction and analysis. His unique strategies provide rapid improvement while avoiding injury. Learn more at the STR website—www.swimmingtechnology.com—or contact Rod through info@swimmingtechnology.com.

SUMMARY

A common misconception is that each individual swimmer will optimize performance with a unique technique. This is simply not the case. Any potential benefit from an individualized technique is trivial compared to an individual's compliance with a science-based model.



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to learn more about the references for this article.

is still plenty of opportunity for “error.” Swimmers will inevitably adopt the technique limitations of the elite swimmers as well as their positive elements.

3. Technique Models Based on Performance Levels. Other approaches begin with a basic model that can be modified for each individual. For example, one method of coaching classifies each swimmer as having one of six variations of freestyle. Then, “as a swimmer develops, they often transition between types” (Swimsmooth, 2015). Another method explains that there is “a common foundation from which all good swimmers build their strokes, but beyond the foundation, we see many variations, depending on an individual’s feel for water” (Edson, 2015). Both methods suggest an uncertainty in instruction that

Who will shock the world of swimming in Rio? Is it someone we can anticipate if we take a deeper look into the backstory of past upsets? The understanding and appreciation of an Olympic upset can enhance our enjoyment of tracking athletes in the years, months and now days leading up to the 2016 Olympics.

Beginning with the November 2015 issue and running through July 2016—a month before the start of the Olympic swimming events in Rio on Aug. 6—*Swimming World Magazine* will bring you its top 9 upsets in the individual events in Olympic history—with an emphasis on the last 50 years. This month:

#6

LEDECKY SHOCKS ADLINGTON & THE WORLD!

BY CHUCK WARNER



In *Swimming World's* coverage of the London Olympics (*SW* Oct, page 24), the magazine wrote the following cutline for this photo of Katie Ledecky: "The women's 800 free was supposed to be defending champion and world record holder Rebecca Adlington's chance to thrill the home crowd. Instead, American Katie Ledecky, 15, won in 8:14.63, taking down the oldest textile best on the books by beating the 8:16.22 that Janet Evans registered back in 1989—eight years before Ledecky was even born."

[PHOTO BY ROB SCHUMACHER, USA TODAY SPORTS]

The roar of 18,000 standing, passionate fans greeted Rebecca Adlington as she emerged through the doorway onto the deck of the London Aquatics Center. A thunderous reverberation urging her onward to another Olympic gold medal seemed to send her into a “skip” toward Lane 4, her position as the top qualifier at the 2012 Olympic finals of the 800 freestyle.

Four years earlier in 2008, Rebecca became the first Brit since 1960 to win an Olympic swimming gold medal when she came from behind in the last 20 meters of the 400 meter freestyle to overtake American Katie Hoff. Then five days later, she buried the 800 freestyle field by at least six seconds (8:14.10), breaking Janet Evans’ world record—a record that had stood for 19 years.

Following those 2008 Beijing Games, Rebecca Adlington was chosen England’s Sports Journalists’ Association’s Sportswoman of the Year. She also finished third in the voting for the BBC’s Sports Personality of the Year award, and she was appointed Officer of the Order of the British Empire (OBE) in the 2009 New Year Honors.

At the 2011 World Championships, Rebecca reaffirmed her place at the top of the sport when, once again, she came from behind and edged Denmark’s Lotte Friis (8:17.51 to 8:18.20) for the 800 gold medal. The stage was set for the 2012 London Olympics where, in front of a boisterous home crowd that—in at least some part—came to the venue in a 140-mph high-speed train named after her. Headed into the London Games, she was poised to solidify herself as the most accomplished Olympic athlete in British history.

STEPPING STONES

While Adlington was winning those two gold medals in Beijing, there were thousands of age groupers around the world dreaming of and working toward attaining Rebecca’s type of success. One such age grouper was a talented 11-year-old girl in Bethesda, Md., who possessed an extraordinary personal foundation, opportunity and work ethic.

Katie Ledecky possessed two critical underpinnings: technical skill and both a respect for—and enjoyment of—hard work. One of the methods that Ledecky cites for her success was introduced by her age group coach, Carolyn Croucher, who would ask the then 10-year-old to write her own training set and then perform it successfully.

The Curl-Burke Swim Club, located around Washington, D.C., was where Katie Ledecky was progressing to evermore challenging training groups. She also acquired a new coach, Yuri Suguiyama, who studied videos of Michael Phelps, which led to some important modifications of her stroke technique.

“We would do sets of 125s, holding 14 strokes a length,” Ledecky said recently. Gradually, Coach Suguiyama either increased the quantity or decreased the rest or asked for faster times. “That set really taught me how to kick harder and lengthen my stroke,” recalled Ledecky.

Each year, Yuri added an additional practice so that by 2011, Katie was training eight times per week. By August of 2011, she had qualified for the Olympic Trials and won both the 400 freestyle (4:10.39) and 800 freestyle (8:36.05) at the USA Junior Nationals.

Swimming World ran the following photo in its special digital bonus issue of the 2012 Olympics. Rebecca Adlington (left) became the first Brit since 1960 to win an Olympic swimming gold medal, winning both the 400 and 800 freestyles four years earlier in Beijing. But in London, American Katie Ledecky’s 800 freestyle victory became one of the greatest upsets in Olympic history.

[PHOTO BY ROB SCHUMACHER, USA TODAY SPORTS]



In September, she entered ninth grade with a ninth training session a week planned for the Olympic year.

When Coach Suguiyama and Katie met at a restaurant for their annual pre-season goal discussion, he wasn’t audacious enough to suggest that in 11 months, she could compete—and defeat—Rebecca Adlington, who at the time was more than 20 seconds faster in the 800 freestyle. But at the conclusion of their discussion, the coach did ask her one critical question: “What would be the ultimate goal for this year?” Katie thought before reluctantly uttering the words, “Make the Olympic team?” Yuri asked her to say it again just to be certain she digested the thought. Slowly she said, “Make the Olympic team.”

They set off to train, race, have fun—and never spoke of that goal again.

There would be many hurdles to clear before she could achieve her barely audible goal. A case of walking pneumonia kept her out of the USA Winter Nationals in December of 2011. However, by February, she was performing very well, swimming her best times at the Missouri Grand Prix Meet. At the Charlotte Ultra Swim in May, she swam faster still, and her 800 time of 8:25.81 was good enough to win over a very strong field.

— continued on 18



[PHOTO BY PETER H. BICK]

OLYMPIC UPSETS – *continued from 17*

In June, a confident Ledecky arrived at the Olympic Trials in Omaha supported by a special weapon: a large, tight-knit family that wouldn't allow her to "lose." Into the Quest Center poured the Ledecky contingent consisting of Mom, Dad, her brother and 15 cousins, aunts and uncles—all with a mindset to love Katie regardless of the results in the pool.

OLYMPIC TRIALS

Although Katie began the Trials swimming well, her first two events led only to disappointment. On the second day, Chloe Sutton jumped ahead of Ledecky on the fourth 50 of the 400 and held on to earn the second Olympic team berth, with Allison Schmitt winning the race in 4:02.84 to Sutton's 4:04.18. Ledecky finished third in 4:05.00.

Though both swimmer and coach left the Quest Center disappointed, Coach Suguiyama emphasized that Katie had swum her best time and bettered Janet Evans' national age group record. The next morning, Katie arrived at the pool with a smile on her face, and the coach mirrored it. But she finished ninth in the semifinals of the 200 freestyle, 2-hundredths of a second behind the last qualifier, just missing the chance to compete for a spot on the 4 x 200 free relay team.

Three days later, Katie qualified second (8:28.99) in the preliminaries of the 800, a second behind Kate Ziegler (8:27.91). But in the finals, Katie immediately took command and split a stunning 4:08.45 at the 400—already 2-1/2 seconds ahead of the field. Katie finished the race strongly, with her 8:19.78—a U.S. Trials record—vaulting her up to the No. 2 spot in the world rankings that year.

But the fastest swimmer was still Rebecca Adlington, who had already swum three sub-8:20 800s in 2012.

Here's how Katie Ledecky reacted after she touched first in the women's 800 free at the U.S. Olympic Trials in Omaha to qualify for her first U.S. Olympic team. At 15, she was the team's youngest member by two years. And when she eventually won the 800 free in London, she became history's youngest Olympic champion in the event and the second youngest American woman (15 years, 139 days) to win an individual gold medal, behind Beth Botsford (15 years, 62 days) when she won the 100 back in 1996.

TRAINING CAMP AND A BEGINNER'S MIND

While some swimmers made final preparations for the Olympics, knowing these Games were going to be a career-changing or career-ending swimming experience, for Katie Ledecky, it was just another swim meet. It was her first trip as a member of the USA national team, and, at 15, she was the team's youngest member by two years.

When she was assigned to the endurance training group headed by veteran coach, Jon Urbanek, she found herself swimming in what was easily the fastest training group in her life. Coach Suguiyama had only one request to make of Coach Urbanek: "Make sure she maintains a tempo of 1.4 (seconds) per stroke cycle."

Urbanek's approach to optimizing the four- to five-week training window between the Trials and the Games was to immediately provide training at about 75 percent of the total volume of what an athlete was accustomed to swimming. His mix of endurance and speed work had long been mapped out with colored charts of times that directed a balanced energy distribution over a week's time, ultimately culminating in each athlete achieving his or her goals.

Early in the camp, the group swam a set of 200s, for which Urbanek's charts indicated Katie should average about 2:14. She swam 2:06s. Tired and sore the next day, she paid dearly for her youthful exuberance. However, she quickly recognized that balancing her effort over several days of training was a more effective approach than going all out on the first day, but not being able to sustain that pace during subsequent days of training.

Head women's coach Teri McKeever masterfully orchestrated an environment of joy and the strengthening of personal relationships within the team. About halfway between Trials and the beginning of the Olympics, the U.S. team moved its operation to France. There, Katie and the other rookies on the team re-enacted a longtime U.S. national team tradition: the Talent Show, in which each of the first-timers showcased his or her "talent." The team's warm reception and frequent compliments about her performance in the Talent Show went a long way to increasing Katie's comfort level.

At the pool, an Urbanek favorite set of 100s has the swimmers alternate a fast 100 with an easy one; then two fast 100s followed by an easy one; then, three fast and one easy; and so on, with the fast swims targeting race pace. Katie was swimming 1:02s and 1:01s for her fast 100s, which put her right on the heels of teammates Andrew Gemmell and Tyler Clary, leading them to joke to Coach Urbanek, "Jon, could you please move her to another lane?"

As the countdown to the 800 free continued, Coach Urbanek began encouraging Katie to be less aggressive at the start of her race. Then he caught himself: "I realized I just needed to get out of her way."

OLYMPICS

Katie was nervous in the prelims of the Olympic 800 free, but she managed to swim 8:23.84, the third fastest time. Coach Sugiyama explained to her that she would be in Lane 3 in the finals. After she was introduced for the finals, he further explained that the next swimmer to be introduced would be Rebecca Adlington—the defending Olympic champion, world record holder and darling of the boisterous, British crowd. He told Katie: "Just take all the energy from that noise and put it into your lane."

The Americans had been on fire all week, and the finals on Day 7 of Olympic swimming began with Missy Franklin's world record swim in the 200 backstroke, followed by Michael Phelps' gold medal in the 100 fly. When Michael passed Katie in the ready room, he gave her a high-five and said, "Go have fun out there."

After Katie was introduced, the roar began for Rebecca Adlington. But Katie was prepared for it. Equally important was what she felt inside herself. Thoroughly trained, she could race with freedom, knowing what mattered most to her—being an adored member of the Ledecky family—was not at risk.

She said later, "I just wanted to go." And she did.

Katie was not the only swimmer who had decided her best chance for gold would mean she had to set a very fast pace. So it was not surprising that Denmark's Lotte Friis, the second qualifier, bolted to the lead, followed closely by Ledecky and Adlington.

In the second 100 meters, Ledecky moved ahead of her Euro challengers. Executing long strokes, excellent rhythm and a stroke rate of 1.4 seconds per cycle—just like her training sets of 125s—Katie hit the wall in 1:59.95, 1.3 seconds ahead of Adlington's world record pace.

Katie moved out to more than a body length lead over Rebecca at the 400, swimming her best 400 time ever of 4:04.34. She was now 1.5 seconds ahead of world record pace. On each breath, she heard the crowd beseeching Adlington to catch her rivals, shouting, "Becky, Becky, Becky." But nothing could break her rhythm until she "woke up."

As Katie completed 600 meters, she felt like she had awoken from a dream: "I'm at the Olympics! I have 200 meters remaining, and I need to finish this race!"

With British royalty in attendance, Katie strengthened her kick, quickly increasing her lead to two body lengths, and raced toward the finish. The possibility of becoming history's youngest Olympic champion in the longest women's Olympic swimming pool event

had become reality.

Katie touched in 8:14.63, the event's second fastest time ever. She turned to the scoreboard, smiling from ear to ear as she spotted the number, "1," next to her name. "Oh my gosh," she exclaimed. Finishing second was Spain's Mireia Belmonte Garcia (8:18.76), with Rebecca Adlington third (8:20.32).

Katie Ledecky had shot to the top of the world by outswimming Adlington in front of the Brit's home crowd. It was one of the greatest upsets in Olympic history.

Katie was the youngest member of the entire contingent of 530 USA athletes at the 2012 Olympic Games. A few years later, she revealed a secret to her youthful milestone: "I never envisioned anything but winning a gold medal."

Authors Note: *As we've seen from her development and her performances since, Katie Ledecky has earned her extraordinary achievements...and recognition as the greatest female swimmer in the world in 2015 by virtue of her unprecedented sweep of the 200, 400, 800 and 1500 meter freestyles at the World Championships. On Sunday, Dec. 12, 2015, Katie Ledecky became the first woman to break the 9-minute barrier in the 1000-yard freestyle, bettering the American record by more than 10 seconds.* ❖

Chuck Warner is a part of *Swimming World Magazine's* editorial board and author of "Four Champions: One Gold Medal" and "And Then They Won Gold." Both books are available for purchase online at www.SwimmingWorld.com.
Next month: "Top 9 Olympic Upsets: #5."

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THE 200 FREE



How important is the 200 freestyle? The University of Georgia Bulldog women cruised to the 2013 NCAA crown with six 200 freestylers combining to score 61 points. Their top four finishers—(from left) Megan Romano (third), Allison Schmitt (first), Brittany MacLean (12th) and Shannon Vreeland (fourth)—also added another 40 points by winning the 4 x 200 freestyle relay. Those two events alone accounted for one-fifth of Georgia's total points (477).

[PHOTO BY PETER H. BICK]

Coaches of high school, college, YMCA and USA Swimming club teams share their training philosophies for an event that requires a real combination of speed, endurance and technique.

The 200 freestyle is a terrific way to go from good to great.

"If you have a quality 200 freestyler, you probably have a good swimmer and a great athlete," says Chris Plumb, coach of a Carmel, Ind. High School team with three girls who have swum 1:47 or better for short course yards. Having lots of them means even better teams—as demonstrated by Carmel High School's girls winning four *Swimming World Magazine* national championships in the last five years.

Then there's SwimMAC and York YMCA that had four scorers in the top 16 in their 2015 summer championships...or the University of Georgia Bulldog women who cruised to the 2013 NCAA crown with six

200 freestylers scoring points.

"It's an interesting event," says Coach Michael Brooks of York YMCA. "I got into the 200 free because I wanted to win the 800 free relay at Y Nationals. Getting second to Sarasota Y and Middle Tyger really irritated me."

The need for speed and an ability to sustain it is a recurrent theme for Brooks and Coach Braden Holloway at North Carolina State.

For Brooks, it starts with distance per stroke (DPS) and adding speed: "We train basically short course meters, and each swimmer has a base stroke count that looks good to me, feels good to them and can be maintained for a long period of time. We

work off of that base count for everything we do. Longer aerobic swimming will be done at base or base minus 1 or 2; faster swimming is done at base plus 1 or 2. So all swimming at all speeds is done with control and a prescribed stroke count.

"When racing, we start off fast, but controlled. Coming off the 100 wall, we want to make a surge. The last 50 is legs and tempo and everything you've got. So the first 50 is very controlled, the middle 100 very, very strong (especially the third 50), and then the last 50 is just everything—especially legs."

Holloway prefers no decelerating or overaccelerating: "I think the biggest mistake is starting out quick and smooth, and throttling down going into the third 50.



Carmel High School's girls have won four of the last five *Swimming World Magazine* national championships. Coach Chris Plumb knows the value of having a quality 200 freestyler, and this year, he has three girls who have swum 1:47 or better for short course yards: senior Claire Adams (left) (1:45.09), an Indiana High School state record), junior Emma Nordin (1:46) and 14-year-old freshman Kelly Pash (1:47).

[PHOTO BY TODD ADAMS]

We train a lot of speed and race pace work, focusing on going out at a pretty high speed, hopefully without a lot of effort. Our goal is to sustain speed for the second, third and fourth 50s. The last 50 will probably be 5-tenths of a second quicker without the flip turn," he says.

"It is also a hard event," says Pam Swander, Senior 1 lead coach at SwimMAC. "The 800 free relay to me is about the health of your team; it is about fitness, and it takes some swimming IQ not to overswim it."

Strategy for the 200 varies by individual swimmer, she notes. "Do they make their move on the second 50 and hold the third, or do they build the second 50 and go on the third?"

"We look at what the best in the world are doing and create templates for our athletes that compare their 50 splits on a percentage basis with the elite. After a strong first 50, many swimmers add between 1.2 to 1.6/1.7 seconds on the second 50, even-splitting the rest of the race. We have signature sets, and swimmers know they need to be in a particular range. We discuss how the 200 should be swum—short or long course. From there, we write sets that allow swimmers to dress-rehearse those race strategies," she says.

"At SwimMAC, most practices are written and geared around the 200. To be a great 200 freestyler, you have to have a six-beat kick." One set that emphasizes that kick is the Parachute 200 Race Strategy set, consisting of:

- 8 x 25 @ :35 kick/swim (the kick is done in body position 11—arms overhead—with snorkel; swim less than 20 seconds and less than their average strokes for a 50 free)
- 200 @ 3:00 @ 85 percent effort (using their race strategy, body position 11)

"I think the biggest mistake (in swimming the 200 free) is starting out quick and smooth, and throttling down going into the third 50. We train a lot of speed and race pace work, focusing on going out at a pretty high speed, hopefully without a lot of effort. Our goal is to sustain speed for the second, third and fourth 50s. The last 50 will probably be 5-tenths of a second quicker without the flip turn."

— **Braden Holloway**
Head Coach, North Carolina State University

- 8 x 25 @ :35 kick/swim
- 2 x 100 @ 1:40 (add up faster than Round 1, using their race strategy)
- 8 x 25 @ :35 kick/swim
- 4 x 50 @ 1:10 (add up faster than Round 2, using their race strategy)
- 8 x 25 @ :35 kick/swim
- 200 for time (90 percent effort)

Swander's swimmers test race strategies in a variety of ways. One is the "Josh Davis"—an all-out experiment done by the former Olympian who once set an American record by going flat-out and holding on. SwimMAC swimmers purposely pick a 200 event in a midseason meet to "fly and die."

"It redefines what is fast for them," says Swander. "So many times, they come back and say, 'I can go out faster now.' It takes courage to do."

JUST FOR KICKS

In addition to DPS and stroke work, York swimmers "do a six-beat kick all the time, especially emphasizing the strength and power of the legs the last quarter of sets," says Brooks. In workouts, he invariably extends sets by adding six or eight 25s on 30 seconds, where "athletes are swimming side by side, racing their guts out. Those 25 sprints matter, and they are going very, very fast on them," he says. (Since focusing on the 200 free, Brooks' girls 800 free relay has won the last three YMCA short course nationals (with Middle Tyger and Sarasota second and third), setting a record in 2015 with a 7:10.06.

"We believe a lot in the legs," says Holloway, whose Wolfpack men garnered second place in the 400 and 800 free relays at the 2015 NCAA Division I meet.

— *continued on 22*



[PHOTO PROVIDED BY NORTH CAROLINA STATE UNIVERSITY]

200 FREE – continued from 21

“In the 50, 100, 200, 500 and even the mile, our freestylers are leg-driven. We do a lot of upbeat, fast swimming, threshold work, sometimes with a stick. We do a good bit of kickboard drill, where we use paddles and kickboards. One hand is on the kickboard, pressing down, while doing repeats of fast kicking with strong powerful pulls, alternating hands. The set is 20 by 25 on :30, and the goal is to drive the legs.”

Swimmers then put the kickboard up and go 8 x 50 on 200 race pace on :50 with paddles. “We give them a stroke count,” says Holloway. “Simonas Bilis goes eight strokes on that drill. Sometimes we do it with a snorkel or limit them to one breath every three strokes.

“On Tuesdays, we can kick up to 80 percent of a 4,000 to 5,000 workout. Freestylers who swim the 200 and below kick up to 50 percent of a workout; 500-and-above people kick, perhaps, 30 percent. Backstrokers and breaststrokers are between 40 to 50 percent, with flyers a little less,” says Holloway.

Plumb’s athletes kick at least 30 minutes a day—“with a board, without a board, snorkel, DragSox, with a stick. We are doing everything we can to just challenge the legs—small kick, short kick, underwater

kick. When you do that much with the kick, you have to be creative,” he says.

SOME FAVORITE SETS

A Brooks’ specialty is three rounds of descending 4 x 200 FAST with intervals depending on ability level. Another is 25 and 50 in “large quantities”; 25 on :25 is usually done at 400/500 race speed. Those done on :30 conform to a 200 race pace. “Done on :35, it hits the 100 free. It might sound like USRPT, but Brent Rushall would consider me a heretic,” Brooks says. Finally, 100s on 1:30, alternating moderate and very fast, also hits 200 race speed.

A SwimMAC staple is a 30 x 50 descend 1-3 on a tight interval. “Coaches assign a heart rate that athletes must stay below,” says Swander. “Swimmers have to descend the 50s down, controlling their heart rates, and figure out how to manipulate it. Do they need to kick less/more, streamline or breathe more?—that’s the education process...really understanding what speed with ease is. How low can you go with your heart rate and hit your speed?”

“Swimmers count their strokes and get their time and heart rate so they know where their ranges are. We design the training sets and tell them, ‘We are going to go fast on this one.’ That allows them to rehearse often

doing four 50s and sometimes 75, 75, 50,” she says.

In his weekly training cycle, Plumb aims for a good balance of aerobic and anaerobic work: “We spend a lot of time training threshold, 50s and 75s on long rest as well.” A favorite is 20 x 50 on 1:30 short or long course. “Swimmers are given a time to beat, which is usually their goal pace. That set will transfer to less and less rest throughout the season,” he says.

DIFFERENT ANIMALS

“I think you’ll see that some really good 200 yard freestylers don’t always correlate to really good 200 meter freestylers,” says Plumb. “The 200 short course free has more of a speed component, while the 200 long course free is more aerobic. That right there is a pretty good indication that they are not the same event. Either way, you need both components. The event is a real combination of speed, endurance and technique,” he says. ❖

Michael J. Stott is an ASCA Level 5 coach whose Collegiate School (Richmond, Va.) teams have won eight state high school championships.



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CROSS TRAINING WITH FULL BODY EXERCISES

BY J.R. ROSANIA
 PHOTOS BY EMMI BRYTOWSKI
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 CARL MICKELSON AND SUSIE PAUL

Looking for alternative ways to get stronger and more fit other than swimming? Swimmers of all ages and abilities are now exploring new and different ways to improve strength and fitness...out of the water!

More and more I'm seeing elite swimmers taking to dryland and other forms of cross training, doing functional training both with weights, medicine balls, bands and cords.

Most of these exercises are multi-joint and multi-muscular movements. Some mimic swim movements; some don't.

In this month's article, I have illustrated several cross training exercises and multi-muscle functional movements. Work you're way up to three sets of 20 reps or 30 seconds per exercise. Begin with one set of each exercise and 20 reps. Keep all resistances light so you can complete the time or reps. Use this program in your conditioning base building phase. Discontinue the routine six to eight weeks away from a major competition.

Energize your training with these cross training exercises and improve your fitness along the way. ❖

MEET THE TRAINER

J.R. Rosania, B.S., exercise science, is one of the nation's top performance enhancement coaches. He is the owner and CEO of Healthplex, LLC, in Phoenix. Check out Rosania's website at www.jrhealthplex.net.



MEET THE ATHLETES

Carl Mickelson swam for the University of Arizona. As a senior, he finished fourth in the 100 and 200 yard breaststroke at the 2012 NCAA Division I Championships.

Susie Paul has been a Masters swimmer for the past 10 years.

NOTICE

All swimming and dryland training instruction should be performed under the supervision of a qualified coach or instructor, and in circumstances that ensure the safety of the participants.

1 DUMBBELL PUSH-UP AND ROW

Begin in a push-up position with hands on dumbbells. Do a push-up. At the top of the position, complete a dumbbell row. Lower and repeat the push-up, and row the other arm.



2 ONE-ARM DUMBBELL CHEST PRESS WITH BAND ROW

While lying supine with a dumbbell in one hand, hang a rubber band so you can row the band. Alternate the arm movements.



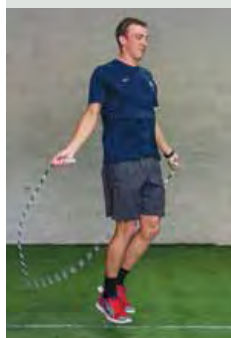
3 SLIDE BOARD

Slip into slide booties and start on the edge. Push off and slide to the other side and push back.



4 JUMP ROPE

Continue jumping rope for a 20- to 30-second set.



5

SLID PUSH

If you don't have a sled available, try pushing a 25- to 50-pound weight plate on the floor. Complete 10 steps each leg.





BEFORE THE BEEP

BY ANNIE GREVERS

Olympic gold medalist and world record holder Matt Grevers shares his pre-race mental preparation: race day, the ready room and behind the blocks.

Five-year-old Matt Grevers was sick and tired of being dragged to watch his older brother's and sister's swim practices. So one day, little Matt jumped in the pool. Son of a swimmer (Matt's mom) and a water polo player (Matt's dad), Grevers had chlorine coursing through his veins. He was wired to swim, not to spectate.

Grevers and Michael Phelps are among only a few Olympians who were swimming successes before the age of 10. Kids tend to plateau, burn out or switch sports, but Phelps and Grevers have continued their winning ways for an astounding 20 years beyond their boyhood fame.

Grevers broke his first national age group record in the 50 yard backstroke at the age of 10. Most kids dive in and hope for the best at that age, but Matt had already been visualizing his perfect swims.

"Visualization came naturally to me," Grevers said. Part of his draw to the sport was the Superman-esque, soaring sensation he felt while gliding through water.

Mental prep has played a pivotal role in Grevers' career. Years of thoughtful, hard work are behind each of the 6-foot-8-inch dynamo's aquatic triumphs. And he's not alone.

Olympic athletes have long paid homage to the saying, "Sport is 90 percent mental, 10 percent physical." Let's not argue over the ratio, but consider how high-caliber athletes get to the top—by having a practiced belief in their abilities.

"The physical aspect of the sport can only take you so far," said Olympic gold medal-winning gymnast Shannon Miller during an interview with the Dana Foundation, a private philanthropic organization committed to advancing brain research. "The mental aspect has to kick in, especially when you're talking about the best of the best. In the Olympic Games, everyone is talented. Everyone trains hard. Everyone does the work. What separates the gold medalists from the silver medalists is simply the mental game."

RACE-DAY PREP

Olympic champion Grevers hears the roar of a crowd and the sound of the starter's whistle long before arriving at the pool. Most big meets transplant swimmers out of their own beds into a hotel room or a village dorm. Grevers begins to ready his muscles here.

"I typically do a dynamic warm-up in my room and prepare pre-race drinks, food, ibuprofen, while I'm stretching. I try to do a full 20-minute warm-up, so I don't need to do that at the pool."

This is also where Grevers begins to rev up his mind.

"I think about who I'm racing, make sure I know what lanes people are in, and try to visualize what I expect from them, so there are no surprises in the race."

Upon arriving at the pool, Grevers meditates—not on his race, but on his feel for the water.

Before diving in, "I drink my energy drink to get the happy, fuzzy feeling that caffeine gives you," he said. After the initial plunge, "I'll push off underwater and stretch while holding my breath—just listening to the churning of water, people kicking on the surface, the calm of the water...it relaxes me. I expand my lungs and picture a perfect stroke. It's like I'm in a flume."

While he's in this channel of calm, Grevers centers his mind on his technique: "I think of the most efficient way to swim. Then I come up to take one breath and swim a 25 without breathing—swimming that perfect stroke that I'd visualized."

THE READY ROOM

At every big meet, there is a box of nerves called the ready room. You and the seven other people in your final heat take a seat in plastic chairs sporting respective lane designations and try to appear composed. Many inexperienced athletes will crack under the pressure tightly held in these four walls. The ready room allows ample opportunities for the competition to seem more prepared and more confident than you.

Grevers is a ready-room veteran, so when he enters the room 20 minutes before his race, he knows how to steady his mind.

"I try not to think about the race too much. I get my muscles warmed up, do enough stretching to make sure my nose can make it to my knees, adjust my goggles, prep my cap, check my suit," Grevers said.

He admits that it's impossible to sit in a room with the guys you are about to compete against and not think about the race, so he tries to distract himself.

"I don't want my adrenaline pumping too early, since I've still got 20 minutes until I race," Grevers said. "That's my 'storing-the-power' phase."

BEHIND THE BLOCKS

Then comes the dramatic walk out and introduction of each athlete. Grevers makes his way to the block and immediately makes any necessary adjustments to the wedge atop the block or the backstroke ledge in the water.

"I don't want to take my jacket and pants off too early. You want to stay warm. I shake and stretch my muscles to ensure they're loose, with good blood flow."

Grevers' favorite stretch involves pulling the foot up (the flamingo stretch) and leaning forward to get a thorough elongation of each quadricep.

After the stretching routine is complete, the announcer's "MATT GREVERS" reverberates through the natatorium. As Grevers' past accomplishments are proclaimed, the Olympic champ eases his gog-

gles over his eyes and moves into a new realm of focus.

"When I put my goggles on, there's a different filter. I see the race through my 'perfect vision.'"

Grevers' mind lapses through each stage of his race one final time before launching into his effort to bring his visualization to life.

Here's a sample of Grevers' "perfect vision" before a 100 backstroke:

"I jump into the water, and it's the perfect temperature. I feel energy stored as I ready my start and prepare to spring. I have a great reaction time, a perfect entry and take nine strong dolphin kicks into my perfect breakout. Then I settle into my tempo and feel the perfect stroke—the stroke I visualized during warm-up."

"Then I think about the turn—being strong on my stomach so I can plant my feet powerfully, into a perfect streamline, continuing with 10 strong dolphin kicks into a perfect breakout, concentrating on a faster rate for my second 50."

VISUALIZATION IS FOR EVERYONE

Why do all of the greatest swimmers, athletes, business people visualize?

Science tells us that visualization works so well because the mental rehearsal of a task has the same effect on your brain as actually performing the task—meaning, the same neural connections fire up whether you're actually doing the task or visualizing the task. We've all felt this when listening to an inspiring story or watching a suspenseful movie. We transport ourselves to that place of anxiety or suspense and physically tense up.

World champion golfer, Jack Nicklaus, has said, "I never hit a shot, not even in practice, without having a very sharp in-focus picture of it in my head."

Grevers' race rehearsal has a wide lens, so he can see where his competitors are in relation to him.

"I picture the competition falling away as I surge to the wall. I know I had the perfect race."

And then he jumps in. ❖

Even as a 10-year-old NAG record holder, "visualization came naturally to me. (Today), when I put my goggles on, there's a different filter. I see the race through my 'perfect vision.'"

—Matt Grevers,
two-time Olympian (Beijing, London)
and six-time Olympic medalist
(4 gold, 2 silver)



[PHOTO BY ANDREA NIGH]

THE TIME IS RIGHT

STORY BY
ANNIE GREVERS
PHOTOS BY
PETER H. BICK

Last year, 21-year-old Kelsi Worrell broke American records, led Team USA at the Pan-American Games, and was even part of a world record-setting relay! She couldn't have asked for better timing to have such a breakout year... especially with Rio on the horizon.

Kelsi Worrell seemed almost stupefied in her press conference at the 2015 NCAA Championships. She had broken Natalie Coughlin's 13-year-old American record in the 100 yard butterfly twice in one day. The University of Louisville junior may not have been completely at ease in the spotlight, but her mother, Erica Worrell, has seen her daughter's beauty and eloquence bloom with her confidence.

"She's grown into herself. She interviews so much better," Erica said, recalling the 2013 Mesa Grand Prix meet, where Kelsi unexpectedly won the 100 fly. The family was going nuts, seeing Kelsi have a breakout performance against some big names such as Claire Donahue, Katinka Hosszu and Dana Vollmer. Then Kelsi was disqualified for exceeding the 15-meter mark. Erica gave a sigh of relief, thinking, "Whew, now she won't get interviewed."

Interviews are no longer a fearsome part of victories for the Worrell family—Kelsi's prodigious performances last year offered ample on-camera opportunities for refinement. "She carries herself so much differently now," Erica said.

FINDING WATER

Kelsi does not remember having any desire to sign up for the swim team as a 7-year-old in Westampton, N.J. The neighborhood pool was just a bike ride away, but "getting into the cold pool early in the morning—that never seemed fun," Kelsi remarked. Still, she and two of her younger siblings, Taylor and Kyle, found themselves competing for the Tarnsfield Torpedos that summer. At Kelsi's first summer league meet, she came up to her mom crying, which really surprised Erica because "she's always been really self-confident."

Kelsi sobbed, "I don't know what to do." But the little swimmer's forlorn phase was short-lived. "I started making friends and realized I was pretty decent at the sport."

"Pretty decent" just might be the highest compliment Kelsi would ever bestow upon herself.

Erica said her daughter's gift was revealed more and more every year, but she excelled from Season 1. The Worrells' neighbor had a daughter who was the best on the neighborhood swim team. Erica recalls him uttering, "Just because they're fast when they're little doesn't mean they'll be fast when they're older." Erica laughs now when she thinks back to that friendly reminder.

PURPOSE IN THE VALLEYS

As fairytale-esque as Kelsi's 2015 was—breaking American records, leading Team USA at the Pan-American Games, and being part of a world record-setting relay at the Duel in the Pool—she has experienced her share of valleys in her career.

During her sophomore year at Louisville, Kelsi jumped up to get the front door at a team function. A freshman moved his leg at an inopportune moment and Kelsi tripped into a high-ankle sprain. It was completely accidental, and fortunately happened during the

off-season (May 2013).

"I wasn't able to kick for weeks—it was very painful. I took a month off, and felt like I wasn't part of the team for a little bit," Kelsi said. "But that enabled me to go home, do a camp at my church and hang out with my brother. I was able to come back a lot healthier—it gave me perspective."

Kelsi's next trial took place a month before the 2014 Phillips 66 National Championships in Irvine, Calif. The atmosphere was intense: the meet would serve as the qualifying meet for the 2014 Pan-Pacific Championships, the World Championships in Kazan, Russia and the Pan-American Games the following summer.

In June, Kelsi had been through the wringer: sleeping in the dorms while working swim camps in addition to training, and traveling to Florida for a week for a local church—trying to train for a few hours in the middle of the day.

"I knew coming back, something didn't feel right. During a VO₂ max set (short rest, max effort), Arthur (Albiero, head coach at Louisville) made me put fins on," Kelsi recalled.



At the Golden Goggle Awards last November, a video clip was played of Kelsi's University of Louisville teammates flooding the pool deck and blanketing the victor in congratulatory hugs and tears. The senior team captain gets emotional replaying that celebration in her mind.

On July 1, Kelsi found out she had mono.

"That was really, really hard. Nationals were five weeks away. We didn't tell the doctors, but my trainer said I could swim 1,000 per day to keep my feel for the water. I was not allowed to lift or do doubles because we didn't want my spleen to burst," Kelsi said.

To any onlooker, Worrell did not have a spectacular nationals. She finished third in the 50 meter fly (26.35) and sixth in the 100 fly (59.34). But to Kelsi, things were ideal. Her spleen didn't burst, and she qualified for her first international meet—the 2015 Pan-American Games in Toronto. — continued on 28

ROOM TO GROW

“I did well enough,” Kelsi said. “God worked through that, because since I didn’t do super-well, I was able to spend a week with my family at home. Then my family was able to go and watch me at Pan-Ams the next summer.”

NCAA DREAM

Erica Worrell had never journeyed to watch an NCAA Championship before, but she picked the best NCAA premier possible. Her eldest daughter simply stole the show at 2015 NAAs—becoming the first woman in history to break 50 seconds in the 100 yard fly, winning the 200 fly, taking third in the 50 free and helping the Cardinals’ 200 medley relay to a second-place finish.

At the Golden Goggle Awards in November, a video clip was played of Kelsi’s Louisville teammates flooding the pool deck and blanketing the victor in congratulatory hugs and tears. The team captain gets emotional replaying that celebration in her mind.

Kelsi thinks back to the final day of the championships, when the team realized they were not just going to finish in the top ten at NAAs, but place sixth! The highest NCAA team finish in Louisville Cardinals history had been 15th in 2014. Worrell became her school’s first-ever female individual NCAA champion.

“Tanja (Kylliainen) and I had each swum 14 races, and she didn’t follow the score.” The memory of Kylliainen falling down and bawling upon hearing the team’s finish is still vibrant in Worrell’s mind.

Erica Worrell has a different freeze frame stuck in her head—“My favorite picture from NAAs is of Kelsi standing on the side, looking up. It’s my favorite photo because she was looking at where we were sitting.”

Worrell has joined the ranks of swimming celebs in the past 11 months, but despite the amount of success she packed into a few months, she still lacked experience in certain realms—such as the international ready room realm.

At the 2015 Pan-American Games in Toronto last July, Worrell said she knew she was going to go fast based on how good she felt in warm-up. She unleashed a Pan-American record in the preliminaries of the 100 meter fly (57.24). But during finals, something felt different.

“I had never had to be in the ready room 20 minutes before my race. I really like to chat, but with everyone speaking different languages, that element was taken away—I was not really myself before my race,” Kelsi said. Coach Albiero told Kelsi he didn’t see her flash her trademark smile as she typically did during walkouts.

Worrell still managed to soar to a 57.78 in finals and win Pan-American gold, but says she will be prepared for the quieter ready room at international meets in the future.

“Every year, I’ve gained more confidence. Being on the team this summer definitely made me feel like I belong.”

Worrell and breaststroker Katie Meili have had similarly astounding breakout years. Meili crushed the Pan-Am record with a 1:05.64 in prelims of the 100 meter breaststroke, vaulting her to second in the world.

“We talked about when we think about the Olympics, and performing there, it makes the Olympic Trials seem less nerve-racking,” Worrell said.

Worrell and Meili had the opportunity to take to the pool with two of Team USA’s most decorated female swimmers—Natalie Coughlin and Allison Schmitt bookended their Pan-Am record-breaking 4 x 100 medley relay.

KELSI WORRELL THROUGH THE YEARS

[PHOTOS PROVIDED BY THE WORRELL FAMILY]



“To be cheering for Natalie as she’s coming in doing backstroke is so crazy,” Worrell said.

A strong Worrell contingent was present to witness Kelsi’s first international stint. “My grandparents, my mom and my uncle all wore matching ‘Team Worrell’ shirts. We had poutine (ultimate Canadian french fry dish). I got to bring them into the village, and show them around.” Yes, Kelsi seems quite at home on the international stage already.

RIGHT ON TIME

Bob Worrell, daddy to the six Worrell swimmers, recalled a recent conversation in the van ride home from practice. Jared (age 13) was discussing how hard his 500s and long kicks set in practice were, and 6-year-old sis, Skylar, piped in, “I had to do double 8s and a 65!” trying to join in on the post-practice venting, but not quite knowing the jargon yet.

Bob and Erica Worrell understand the swim terminology better than their youngest, but neither parent was a swimmer.

“Kelsi appreciates that we still know nothing about swimming,” Erica said. “We weren’t allowed on deck during her club practices, so I would sit in a solarium. I was always lugging other kids, so I never paid attention to practice.”

Erica and Bob Worrell have made a mission out of freeing their kids from an identity entirely wrapped up in swimming. “We’ve tried to make sure they know they are a person, a child of God first. I want their identity to be that,” Erica said, “whether they swim or not.”

Kelsi seems so grounded—delighted, but not infatuated with success. Some of her personality traits and characteristics of being the eldest of six kids have buttressed her physiological talent.

“She is very goal-oriented,” Erica said. “The password for her phone was one of her goal times.”

Kelsi’s passion for swimming bleeds through into something as trivial as an inquisitive game to pass time on a road trip. The question: *What is your favorite sound?* Kelsi’s answer: *the sound of being underwater.*

Time has always mattered to Kelsi. Not just the amount of time it might take her to complete a 100 yard butterfly, but how much time she might have to complete homework, how much time it might take to recover from illness, how many minutes she would have to prepare for practice...

The Worrells own a 12-passenger van that allows them to cart six children around and play a big part in the swimming carpool rotation. “My mom has lived off of carpools!” Kelsi said.

The seasoned members of the carpool knew to get to the pickup spot at a specific time, so they would be precisely 15 minutes

early to practice. Erica recalled one afternoon when a new member was added to the carpool. The newbie family was five minutes late to the handoff point, and the stress coursing through Kelsi’s body was palpable. “You could cut the tension with a knife,” Erica laughed at the memory. Her daughter didn’t like to be late. The new family knew better the next time.

Kelsi qualified to swim at the 2012 Olympic Trials two months before the meet, and as her coach said, went for the T-shirt. “I think I dropped some time and took advantage of the free food, too,” Worrell chuckled.

Kelsi’s final year as a Louisville Cardinal aligns with the Olympic year. With the butterfly’s career blossoming and her obsession with timing, it’s very likely that Worrell will walk away from the 2016 Olympic Trials with more than a T-shirt and free food. ❖

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HOW OLYMPIC GOLD MEDALIST TYLER CLARY FUELS

BY ANNIE GREVERS, CAROLINE KOSCIUSKO and TASIJA KOROSAS

PHOTOS BY CAROLINE KOSCIUSKO

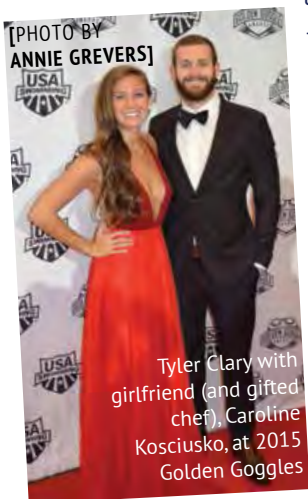
How do you eat like an Olympian? Well, this new regular feature will fill you in on how the best swimmers in the world are filling up. The world of nutrition can be murky and contradictory, so pull up a chair at this table of champions to understand why swim stars take food seriously

and how their food critically supports their training.

You may know Tyler Clary's name from the 2012 London Olympic Games, when he charged

through the final 50 of the 200 back to win an Olympic gold medal at his debut Games. Clary is fortunate in that his long-time girlfriend, Caroline Kosciusko, loves to cook. And by the looks of it, she's a gifted chef.

Here's what's been served up lately at Tyler Clary's house, along with some nutritional explanations from *Swimming World's* nutrition guru, Tasija Karosas.



[PHOTO BY ANNIE GREVERS]
Tyler Clary with girlfriend (and gifted chef), Caroline Kosciusko, at 2015 Golden Goggles

DAY 1 BREAKFAST PREP

Potatoes cooking...with the banana pancakes...and scrambled eggs.

DAY 1 BREAKFAST

Two sausage patties, potatoes (cooked 6 minutes in the microwave before cooking on stove top) prepared in safflower oil, Cajun seasoning and chives, then 3-ingredient pancakes (2 bananas, 2 eggs, 2 tsps cinnamon). Whisk it all together and then cook like normal pancakes. DELICIOUS! And then scrambled eggs with a couple stray chives in there as well.

Why It's Good: Breakfast acts as recovery from morning practice and fuel for the rest of your day. This is why having a balanced meal with all three macronutrients is crucial. The potatoes and banana pancakes act as carbohydrates. The safflower oil and eggs act as healthy fats. The sausage patties and eggs act as protein.



DAY 2 BREAKFAST PREP

Tyler LOVES peppers, and they're super easy to scramble with eggs.

DAY 2 BREAKFAST

Tyler lifted today, so a couple more sausage patties, then the green, red and yellow peppers cooked up with the potatoes in safflower oil. Once they are fully cooked, I scramble in 4 eggs with them. Mango on the side.

Why It's Good: Eggs are always a good decision when finding the right breakfast food. Eggs contain healthy fats, proteins and some of your key vitamins and minerals.

DAY 2 DINNER

Cooking a whole chicken is super easy! I bake mine for 3-5 hours at 350 degrees in my oven. I season it with a little Bell's seasoning, and it tastes great!



I steamed broccoli, carrots and green beans in a frying pan for about 10 minutes—I like to make sure the veggies still have a crunch to them. Then I mixed all that in with brown rice, then added the cooked chicken on top.

Why It's Good: After a long day of training, fueling recovery is crucial. For dinner, a large piece of lean meat, such as chicken, is perfect to rebuild any muscle breakage caused during a workout. A side of brown rice or other healthy grains will help restore glycogen stores to prepare for the next day's workout.

LUNCH FOR THE WEEK

This week's lunch was homemade turkey soup! It's a spin-off of chicken noodle soup, but with turkey and quinoa. I bought a discounted turkey on Sunday and made soup from the carcass. Very simple and made great soup for the whole week! Tyler loves to eat soup between workouts. I added in celery, carrots, onions, salt and Bell's seasoning again. Kept it in the fridge, so he could easily scoop some out and microwave it.

Why It's Good: Lunch is typically the lighter of the meals between breakfast and dinner, but that does not mean it has to be less nutritious. A simple homemade soup with added meat and grains does the trick for healthy fuel before an intense afternoon workout.

SECOND LUNCH

One day Tyler lifted, then had a test set that night, so I made him a second lunch right before he went to workout in the evening...and it was a chicken sandwich with spinach, chicken, feta and hot sauce.

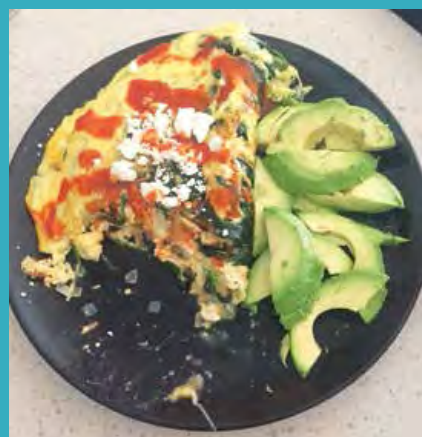
Why It's Good: A sandwich is always a good go-to for lunch. This is because it offers the perfect carbohydrate-protein ratio. The wrap will act as the main source of carbohydrates, and the chicken will act as protein. Carbohydrate and protein will work together to help keep your muscles fueled and ready to take on any workout that is ahead of you. ❖



DAY 3 DINNER

We were craving red meat! Venison burger (cooked medium rare) with spinach, tomatoes and feta cheese on top. Regular burger buns because we think they're tastier than whole wheat.

Why It's Good: Red meat is rich in iron. For all swimmers, iron is a crucial mineral for performance. Adding red meat to your diet once or twice a week is important to increase iron stores so you are able to go longer and faster in the pool.



DAY 4 BREAKFAST

The avocados were finally ripe! Pictured is a yellow onion and spinach omelette with feta cheese and avocado! Putting hot sauce on top was perfection!

Why It's Good: Variety is key to nutritional success. Eggs are always a great option for breakfast. Adding different vegetables to your eggs each day helps get the variety of nutrients a swimmer's body needs to train at the highest level.



DAY 5 BREAKFAST

Pictured is a potato, spinach and yellow onion scramble with a side of turkey bacon and mango.

Why It's Good: As seen in our Day 4 breakfast, variety is important. Adding turkey bacon and potatoes to your breakfast while taking out the avocado and cheese offers the body a variety of different nutrients to utilize during training and recovery.



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When the Fitter and Faster Swim Tour was established in 2009 we produced less than 20 clinics. During the year 2015, we produced more than 170 sessions throughout the United States.

Producing clinics and camps that exceed the goals of our local hosts is very important to us. Fitter and Faster Swim Tour selects where we

produce clinics based on the shared objectives and relationships we establish with teams, LSCs, and leagues. We invest in every event that we produce and do our best to keep the financial investment on the part of the Event Host to a minimum.

Depending on the schedule of the athletes we work with, we are capable of producing more than ten clinics or camps anywhere in the United States on any weekend during the year.

See display ad on page 33.

FUSION SWIM CAMPS

1700 Post Rd. D-5, Fairfield, CT 06824
 800.944.7112
 support@FusionSwimCamps.com
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FAST-PACED. EXPLOSIVE. THRILLING. Fusion Camps offer young swimmers a terrific opportunity to improve their technical and competitive skills, make friends and have fun! Campers will improve individual stroke times, learn start and turn techniques, strength train and participate in timed trials daily. The Fusion Swim staff is comprised of talented and energetic NCAA coaches & Swimmers dedicated to the individual development of each camper.

The Fusion Swim Camps are designed to give young athletes the opportunity to work hard and improve in a fun, positive atmosphere!

NEW THIS SUMMER: 1 Day, Start & Turn Clinics working on the back & freestyle stroke starts, underwater kicking, flip & open turns. Film, Dry & technique training included. Boys and Girls Ages 8 - 18

June 19 – 23: Gregg Parini Swim Academy, Denison University (OH)

June 19 - 22: Brian Schrader Swim Camp, Denver University (CO)

HARTWICK COLLEGE COMPETITIVE SWIMMING AND DIVING CAMPS

Dale Rothenberger, Director
 Hartwick College, Oneonta, NY 13820
 607-431-4714 Fax: 607-431-4018
 rothenberged@hartwick.edu

Celebrating Its 37th Year!

An extensive program for ages 8-18 (co-educational...resident and commuter campers) emphasizing improvement in the fundamental skills of competitive swimmers and divers. Morning, afternoon and evening sessions will balance time spending with water and dry-land training. Above and under-water filming and analysis. Lectures on nutrition, mental preparation, strength training, etc. Sprint/distance camp emphasizes conditioning and proper training of the major energy systems. Diving camp concentrates on technical improvement on 1- and 3-meter springboard diving. Stroke camp enables competitive swimmers to develop skills and techniques in starts, turns,

IM, and competitive strokes. Special two and three-week sessions are available. Director, Dale Rothenberger, Hartwick swimming and diving coach, will be joined by a staff of highly experienced coaches, counselors and guest clinicians (1:6 staff/camper ratio). Enrollment limit guarantees individual attention and frequent feedback.

July 3-8 Springboard Diving Camp
July 10-16, Stroke Technique Camp
**July 17-23, Stroke Technique/
 Sprint/Distance Camps**
July 24-30, Stroke Technique Camp
Residential Camp: \$610 per week
Commuter Camp: \$505 per week
(Multiple-week discounts available)

LONGHORNS SWIM CAMP

Jon Alter, Director
 The University of Texas
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 512-475-8652 Fax: 512-232-1273
 longhornswimcamp@athletics.utexas.edu
 www.Longhornswimcamp.com

38 years of excellence! Headed by 2012 Olympic and Texas head men's coach Eddie Reese, 2013 World University Games and women's head coach Carol Capitani, and assistant coaches Kris Kubik and Roric Fink, the Longhorns Swim Camp is the most exciting camp in the country! Guest coaches and speakers include Olympians Brendan Hansen, Ian Crocker, Josh Davis, Colleen Lanne-Cox, Garrett Weber-Gale, Ricky Berens, and Whitney Hedgepeth. Open to male and female competitive swimmers, ages 8 to 18. Camp is held at the Jamail Texas Swimming Center on the University of Texas at Austin campus, home to 20 NCAA team champions. Facility includes a 50-meter by 25-yard pool, and 25-yard by 25-meter pool. Four training groups based on age and ability, with a 1:7 coach/swimmer ratio in technique sessions. Daily training includes challenging long-course sessions Monday-Friday mornings; technique sessions Monday - Thursday afternoons and evenings, with start/turn work included. Classroom sessions on technique and race strategies held. Underwater video of each camper analyzed by a coach. Daily social activities and field trips offered. Multiple-week stays include planned weekend activities with supervision. Experienced, mature, adult staff provide 24-hour supervision. Cost: Overnight Camp \$1025; Day Camp \$925. Complete camp information and online registration available at Longhornswimcamp.com. Per NCAA rules, sport camps and clinics conducted by The University of Texas are open to all entrants. Enrollment is limited only by age, grade level, gender, and capacity restrictions as specified by each camp. NCAA guidelines prohibit payment of camp expenses by a representative of The University of Texas' athletics interest. NCAA rules also prohibit free or reduced camp admission for prospects (9th grade and above).

MERCERSBURG SWIM CLINICS

Glenn Neufeld, Head Coach
Pete Williams, Associate Head Coach
Mercersburg Academy
300 East Seminary Street
Mercersburg, PA 17236
(717) 328-6225
summerprograms@mercersburg.edu
www.mercersburgsummer.com

Mercersburg Swim Clinics are dedicated to improving your technique and helping you develop as a swimmer both inside and outside of the pool. Mercersburg Academy's storied aquatics program has produced over 30 Olympians and brings a tradition of excellence to their summer program. The primary aim of Mercersburg Swim Clinics is to provide an experience that teaches swimmers the most innovative techniques available, while having fun. The philosophy is simple. Swimmers do not just compile distance, but rather work on improvements in starting, turning, and stroke techniques. Mercersburg Swim Clinics participants stay in Mercersburg Academy's state of the art residence halls that are recently renovated, air conditioned with carpeted hallways and have bathrooms on every hall with individual shower stalls. The swimmer to staff ratio is around 5 to 1. Mercersburg Academy's elite coaching staff and other successful coaches from colleges and club teams will instruct swimmers throughout the week. Counselors are generally current and former college swimmers or Mercersburg Academy graduates with swimming experience. Cost of camp; overnight camper: \$650; commuter camper: \$460. Mention this listing and use the promo code "SWIMMINGWORLD10" to receive a 10% discount! Team discounts are also available.

Session 1: June 19-23, 2016

Session 2: June 26-30, 2016

MICHIGAN SWIM CAMP

Jim Richardson, Director
8160 Valley View Drive, Ypsilanti, MI 48197
734-845-8596
Fax: 734-484-1222 / 734-763-6543
umswim1@gmail.com
www.michiganswimcamp.com or
www.camps.mgoblue.com

Four sessions open to any and all entrants, limited to 185 campers per session in Canham Natatorium at the University of Michigan. A staff of 50 and three instructional sessions per day, ensure the individual attention necessary for significant improvement. Coaches Mike Bottom, Dr. Josh White, Rick Bishop, Danielle Tansel, Mark Hill, Kurt Kirner, and Roger Karns are directly involved in coaching and teaching campers. All campers HD filmed daily and receive a written stroke analysis. Optional custom 4 view underwater video available for

a fee. Choose the Intensive Training Tract or the Technique Development Tract. World-class staff provides leadership and mentoring that encourage each swimmer to strive for excellence in and out of the pool. Cost: \$770/week includes instruction, swim cap, T-shirt, color photo, instructional printed materials, "goody bag", and room and board; \$620/week day camper fee includes all of the above (less room and board) and between-session supervision. See display ad on page 39.

**June 12-17, July 10-14,
July 31 – August 4, August 7-11**

NAVY SWIM CAMPS

Bill Roberts, Camp Director
Navy Swimming Camps 2016
566 Brownson RD, Annapolis, MD 21402
(410) 293-5834, (410) 293-3012
FAX: (410) 293-3811
navyswimmingcamp@usna.edu
www.navyswimmingcamp.com
www.navysports.com
Facebook search: Navy Swimming Camp

Expect direct results by being part of the 2016 Navy Swimming Camp this summer! Our principal goal is to provide you the very best in individual instruction, evaluation, camper experience, and safety/supervision. The purpose of our camp is to offer you a unique environment to learn and develop your competitive strokes including all related starts, turns and finishes. Navy Swimming Camp is a stroke-intensive camp. Swimming campers will receive individual attention. Additional training sessions are offered to all needing to maintain conditioning while at camp. Video analysis, dry land activities designed to improve individual fitness levels, performance, training, goal-setting, leadership presentations and the Severn River boat cruise are all part of the schedule for 2016.

Campers will learn, train and reside in an amazing and unique environment on the grounds of the United States Naval Academy. The Navy camp is led by an experienced camp staff while providing the very best in 24 hour supervision.

See www.navyswimmingcamp.com for greater detail including brochure, application, daily schedule and frequently asked questions. Cost for each camp: \$625/commuter camper (ages 8 – 18,) \$675/extended day camper (ages 8 – 18,) \$725/resident camper (ages 9 – 18.) All campers receive an exclusive NAVY swimming shirt & NAVY backstroke flag. Go Navy!
See display ad on page 39.

**June 14 – 18, Session I
June 20 – 24, Session II
Clinics: June 18 & 19
(see website for 2016 clinic offerings)**

NORTH BALTIMORE SWIM CAMP

NBAC is proud to announce it's tenth year of Competitive Swim Camp. In the last ten years, NBAC has hosted swimmers from 37 states and Puerto Rico and sixteen foreign countries. On the threshold of its 50th Competitive Season, NBAC is one of the most highly regarded swim programs in the country. NBAC is the only team in the country to be awarded GOLD MEDAL status every year since the recognition began in 2002. Producing national and international level athletes for almost half a century, NBAC's record of 37 Olympic Medals, 48 World Records and 3 Olympic Coaches is remarkable considering our team size of just under 200 swimmers. As we prepare for the Olympic Year 2016, we invite year round competitive swimmers ages 9-15 to join NBAC for a week and learn the "NBAC Way."

Sign-up ONLINE at www.nbac.net
See display ad on page 40.

**Day Camp \$775, Overnight \$950
June 20-24, June 27-July 1**

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Wildcat Swim Camp
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nuswimcamps@gmail.com
www.nuswimcamps.com
www.nusports.com

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We provide a unique mix of training and technique work in a top tier aquatic center within our beachfront facility. Each practice is conducted by the entire NU coaching staff and several of our elite swimmers. We plan daily drills to work on strokes, starts, and turns. Along with the hard work, we plan daily activities away from the pool that make this a truly enjoyable experience. Our goal is to provide each swimmer with insights into the fabulous sport of swimming that help them to improve and enjoy their swimming experience. Contact us now! Please don't delay as camps fill up annually.

**June 12-16: Commuter Camp
June 21-25: Commuter and Resident Camp**

– continued on 36

Check out camp listings on
www.swimmingworld.com/camps

OHIO STATE SWIMMING CAMPS

Bill Wadley, Camp Director
McCorkle Aquatic Pavilion
 1847 Neil Avenue, Columbus, OH 43210
 614-292-1542, 614-688-5736
 Wadley.1@osu.edu
 www.ohiostatebuckeyes.com

Train and learn from Ohio State Coaches Bill Wadley & Bill Dorenkott as they lead the Ohio State camps with the assistance of Dave Rollins and Jordan Wolfrum. The Ohio State staff will conduct the camp in a healthy, wholesome environment providing a positive experience for all campers. The camp is designed to focus on the technical aspects of starts, turns, and stroke technique in a fun and enjoyable environment that will prove beneficial for each camper. It is our plan to share the most up to date drills in a manner that is memorable for the athlete. Many of our campers have gone on to win State titles and even become National record holders and USA Olympians. Coaches Dorenkott and Wadley have both served on numerous USA National team staffs and each of them have produced Olympians and National record holders. The camp will take place in America's finest Aquatic center that hosted the NCAA's and Big Ten Championship in 2010.

Evening Camp, Technique and Training

May 18-21; May 26-29

Commuter Only Technique and Training

June 8-11

Commuter, Overnight

Technique and Training

June 14-18; June 21-25

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Coach Mariusz Podkoscielny, Camp Director
 Pine Crest Swim Camp, 1501 N.E. 62nd Street
 Fort Lauderdale, FL 33334-5116
 (954) 492-4173
 swimcamp@pinecrest.edu
 www.pinecrestswimcamp.com
 www.pinecrestswimming.com

Pine Crest Swim Camp gives swimmers the knowledge, training, background, technique, peer support and attitude that is needed to get to the next level. With top quality coaching, every camper will leave Pine Crest Swim Camp a better swimmer. At Pine Crest, we go a step beyond other camps and welcome overnight campers for full week-long stays (Sunday through Saturday) and day campers for Monday through Friday stays. The cost for our overnight campers is \$850 per week, which includes two workouts a day, three meals per day, daily activities, classroom sessions and 24-hour supervision. The cost for our daily campers is \$625 per week. The Camp Registration forms are available on the website and registration online is also available. Last year, we had swimmers from over 30 countries attend. Come to Pine

Crest Swim Camp and join our international atmosphere, athletes and coaches. Pine Crest Swim Camp: "The Camp that makes a difference." See display ad on page 41.

Overnight Camp:

June: 12-18, 19-25, 26- July 2

July: 3-9, 10-16, 17-23, 24- 30

Competitive Day Camp:

June: 13-17, 20-24, 27- July 1

July: 4-8, 11-15, 18-22, 25-29

SPEEDWEEKS BY SWIMMING TECHNOLOGY RESEARCH

Not all swim camps are created equal!

If you want to swim faster with less shoulder stress, STR's SpeedWeek is the only camp that actually delivers.

- Science-based instruction that makes an immediate difference
- Aquanex analysis to pinpoint the necessary technique adjustments
- Proven "deliberate practice" strategies to accelerate learning
- A format based on optimal learning, not more of the same, unproductive yardage

Dr. Rod Havriluk conducts each SpeedWeek. He was selected by *Swimming World* as one of 10 people having the greatest impact on swimming and is internationally-recognized for his approach to improving technique and preventing injury.

Guest experts speak on psychology, strength training, nutrition, physical therapy, and physiology. SpeedWeeks to insure maximum individual attention.

SPACE IS LIMITED! There are only two US-based camps scheduled for summer 2016.

Much more information is posted on the STR website - <https://swimmingtechnology.com/clinics-for-swimmers/swim-camps-and-clinics/speedweek-swim-camps/>

Register online -

<https://swimmingtechnology.com/shop/>

Request additional information at

kidd@swimmingtechnology.com.

Please note: Each SpeedWeek is limited to 12 swimmers who are serious about swimming faster. If you are looking for a "fun camp" to meet former Olympians, this camp will not be a good fit.

UTAH SWIM CAMPS

Jonas Persson, Camp Director
 (801) 448-1478
jpersson@huntsman.utah.edu
www.UtahSwimCamps.com

University of Utah Swim Camps gives young athletes the tools needed to be successful. Camp Director and Olympian, Jonas Persson, and Head Coach Joe Dykstra, with their highly qualified staff, give personalized coaching, taking swimmers to the next level. Each day includes two water sessions focusing on all

strokes, turns, starts, with instant video analysis and one-on-one coaching. In addition, camp offers educational sessions, including dryland workouts, stretching routines, nutrition advice, and goal setting. Campers will also learn more about the psychology of training, mental aspect of the sport, and dynamic team building strategies. Open to any and all entrants, limited to age 8-18. See display ad on page 40.

June 6-10: Extended Day Camp

June 13-17: Overnight Camp*

July 5-9: Overnight Camp*

July 11-13: Day Camp

July 14-16: Start & Turn Day Camp

**Includes day and extended day options*

WYOMING SWIM CAMP

Thomas Johnson, Head Coach and Director
Wyoming Swim Camp
 Dept 3414, 1000 E. University Ave.
 Laramie, WY 82071-3414
 307-766-6265
tomj@uwyo.edu

Wyoming Head Swimming Coach Tom Johnson is hosting the 16th Wyoming Swim Camp this summer. Wyoming Swim Camp is a premier summer swimming experience and is proud to offer its' winning tradition to competitive swimmers. Coach Johnson, Coach David Denniston and Coach Kirk Ermels and the staff stresses the importance of swimming with outstanding stroke technique in a positive training environment.

The swim camps are held at the beautiful campus of the University of Wyoming located 135 miles north of Denver, Colorado, and is convenient to Denver International Airport as well as the Cheyenne, and Laramie, Wyoming Airports. The University of Wyoming offers an outstanding summer experience at 7220 feet, offering the opportunity of altitude training at the highest Division I school in the United States.

Wyoming Swim Camp is open to all, age nine years of age and older. Staff ratios generally range 1:8 coach to swimmer ratio. It is also one of the few camps that offer video analysis at NO additional charge. It is recommended that participants are competitive swimmers.

Coaches who are interested in accompanying their team should contact Tom Johnson directly (307) 766-6265 or E-mail at tomj@uwyo.edu. To provide the very best camp experience each camp is limited to the first 60 swimmers for each week.

Online registration at the University of Wyoming's Swimming and Diving Team page

Start and Turn 1

June 3-5, 2016

Camp 1 and Intensive Camp 1

June 5-10, 2016

Camp 2 and Intensive Camp 2

June 12-17, 2016

Start and Turn Camp 2

June 17-19, 2016 ❖



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Elite Camp

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For swimmers 13 years and older
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Train in the system that has made
the Bolles Sharks so successful

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June 12–17 &
June 19–24

Designed for competitive
age group swimmers

Arrive Sunday, leave Friday

Work with the World Class
Bolles coaching staff
and swimmers



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For information contact:

Jon Sakovich, Head Swim Coach

(904) 256-5216 | sakovichj@bolles.org

or Clare Blackwell, Senior Assistant Swim Coach

(904) 256-5214 | blackwellc@bolles.org

www.bollesswimming.org



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WITH HALL OF FAME AND OLYMPIC COACHES DENNIS PURSLEY & JONTY SKINNER

MAY 29 - JUNE 3 | JUNE 5 - JUNE 10 | JUNE 12 - JUNE 17 | JUNE 19 - JUNE 24



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2016 AUBURN



SWIM CAMP



STARTS AND TURNS CAMP

MAY 21-22

SESSION 1

MAY 29 - JUNE 2

SESSION 2

JUNE 4 - JUNE 8



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87 Individual NCAA Champions - 351 Individual SEC Champions - 2,328 All-American Honors
49 Olympians Representing 22 Different Countries - 32 Olympic Medals
13 NCAA Team Titles - 23 SEC Team Titles

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Two Time Olympian



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3 Times Olympic Gold Medalist



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2016 CAMP DATES - REGISTER EARLY!

WEEK 1 - JUNE 12 - 16

WEEK 2 - JULY 10 - 14

WEEK 3 - JULY 31 - AUG 4

WEEK 4 - AUG 7 - 11

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DR. JOSH WHITE
ASSOCIATE HEAD COACH
NCAA ALL-AMERICAN & NATIONAL CHAMPION



RICK BISHOP
ASSOCIATE HEAD COACH
USA NATIONAL TEAM STAFF



MARK HILL
ASSISTANT COACH
3-TIME ALL-ACC SWIMMER



DANIELLE TANSEL
ASSISTANT COACH
NCAA ACADEMIC ALL-AMERICAN



JIM RICHARDSON
CAMP DIRECTOR
3-TIME NCAA COACH OF THE YEAR

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Contact us at: 734-845-8596 | umswim1@gmail.com

Michigan Swim Camps are open to any and all entrants, limited only by age and specified number of participants



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\$675 Extended Day
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June 27-July 1



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AND DIVING**

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REGISTRATION STARTS DECEMBER 1ST, 2015 - UTAHSWIMCAMPS.COM - OPEN TO ANY AND ALL ENTRANTS BETWEEN AGES 8-18

CAMP DATES:

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JUNE 13-17: OVERNIGHT CAMP*

JULY 5-9: OVERNIGHT CAMP*

JULY 11-13: DAY CAMP

JULY 14-16: START & TURN DAY CAMP

* INCLUDES DAY & EXTENDED DAY CAMP OPTION

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EDUCATIONAL SESSIONS & PRESENTATIONS | TEAM BUILDING



HEAD COACH
JOE DYKSTRA



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JONAS PERSSON
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MICHELE LOWRY



ASSISTANT COACH
MARIUS ALEKSA

REGISTER AT UTAHSWIMCAMPS.COM

Camp Director: Jonas Persson
Camp Director email: jpersson@huntsman.utah.edu
Camp Director phone number: 801.448.1478
Registration starts December 1st, 2015



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REGISTER ONLINE NOW!

7 WEEKS: JUNE 12 - JULY 30



Coach Dennis Pursley

Head Coach

Women's and Men's Swimming and Diving
University of Alabama | Tuscaloosa, AL

- University of Alabama, B.A., English, '72; M.A., secondary education with an English concentration, '73
- Guided six swimmers (including Mary T. Meagher and Glenn Mills) to the 1980 Olympic team
- Selected as first head coach of the Australian Institute of Sport, coaching six Aussies to the 1984 Olympic team
- Appointed USA Swimming's first national team director in 1989; during his tenure, the USA team medal count at the Olympics was tops among aquatic nations in 1992, 1996 and 2000
- Chosen head coach of British Swimming (2008) and British Olympic Coach (2012)
- Named one of the top 25 most influential people in USA Swimming (2003)
- Inducted into the ASCA Hall of Fame (2006)

As a club coach, Pursley led the Cincinnati Marlins to three national championships. In 1980, 11 of his swimmers accounted for 28 individual top 25 world rankings. The Marlins also placed eight relays in the world top 25. That year, Pursley earned ASCA Coach of the Year honors and an Olympic coaching berth.

DENNIS PURSLEY

BY MICHAEL J. STOTT

Alabama's Dennis Pursley is recognized as an international aquatic legend. More than 40 years after winning an SEC 200 yard breaststroke title, he is back, raising the Crimson Tide to NCAA relevance.

Q. SWIMMING WORLD: How did Alabama coaches John Foster and Don Gambril influence you?

A. COACH DENNIS PURSLEY: Through their work ethic. Coach Foster was a pioneer who had to do it all for a below-poverty-level salary that forced him to teach swim classes to pay the bills. He had two graduate assistants—one for swimming and one for diving, and no other support staff. Coach Gambril was a focused, no-nonsense coach who clearly articulated our goals and expectations, setting high standards and holding us accountable to achieve them. His organizational skills, attention to detail and “whatever-it-takes” attitude had a great impact on my formation as a coach.

SW: You have coached worldwide. What motivated you to return to Tuscaloosa?

DP: Partly because the timing was right. I have always believed that it would be great to coach at my alma mater. Alabama is a thriving university currently achieving academic and athletic success unprecedented in its history. After visiting the school and seeing the extraordinary resources and opportunities, I couldn't imagine that there existed a better coaching opportunity.

SW: You carry a huge roster—34 women, 35 men. Why so large?

DP: With 10 divers, that is still a large team. I have an outstanding staff with five full-time assistants plus a number of student/volunteer assistants and exceptional support staff. We are able to give all of the athletes plenty of individual attention. A large team is more conducive to better workout competition and a stronger team dynamic.

SW: Twelve athletes are foreigners. Is it imperative to have a squad of international athletes to be competitive at the NCAA Division I Championships?

DP: I have found U.S. athletes to be more familiar with the team concept on the front

end, while the international swimmers are typically more aware of the importance of the lifestyle commitment in respect to prehab, rehab, nutrition, rest, etc. They can both learn and benefit from each other.

SW: You are a proven program builder. What does it take for the men to be top six and the women top 15 at NCAAs?

DP: More depth, which comes with time. We are getting remarkably stronger, but not quite at the NCAA championship level yet. It is doable in the next two to three years. It's all about recruiting.

SW: What is a normal mid-season weekly swim schedule for your athletes?

DP: Most of our swimmers do nine pool sessions each week: doubles on Monday, Tuesday and Friday, and singles on Wednesday, Thursday and Saturday. Three or four of those are long-course sessions. Although there is a significant amount of overlap in the training for same-event swimmers, we go to extremes to identify the individual characteristics of each athlete, and we address them in the training plan. Our goal is to develop a strong team dynamic without losing sight of the individual needs of each athlete.

We also combine past tried-and-true principles with cutting-edge concepts. These things have contributed to the progress we have made since the new staff was assembled three years ago. In the past two years, our men have progressed from last in the conference to top 10 in the nation, and our women have made similar progress, although not yet as dramatically reflected in the rankings.

SW: For dryland?

DP: Dryland can vary from three to six sessions per week and is also very specific to the needs of the individual swimmer and the events they swim. We use a computerized tracking system to monitor their progress and workload.

— continued on 44

HOW THEY TRAIN:

CONNOR OSLIN

BY MICHAEL J. STOTT • PHOTOS PROVIDED BY UNIVERSITY OF ALABAMA SPORTS INFORMATION



Undersized (thanks to HGH deficiency at birth) and underappreciated since grade school, 5-11 Connor Oslin is a six-time All-American and University of Alabama record holder in the 100 and 200 yard backstroke with times of 45.08 and 1:40.77.

Early on, Oslin began swimming year-round in high school, and though hardworking, he was lightly recruited. “He has always been one of the smallest kids on his sports teams,” says Alabama coach, Dennis Pursley, “and he loves playing the role of the underdog.”

At last year’s NCAAs in Iowa City, Oslin was a key contributor to Alabama’s 10th-place team finish. He placed fifth in the 100 back (45.54) and 13th in the 200 back (1:41.11), and he also swam the backstroke legs (20.78, 45.08) on the Crimson Tide’s second-place 200 medley relay and third-place 400 medley relay.

Alabama’s rise in the NCAA rankings is due in no small part to Pursley’s coaching expertise and talented staff (Jonty Skinner, et al.) and the development of under-the-radar talent. Pursley & Co. have taken the Tide men from 29th in 2013 to 12th (2014) to 10th (2015), and have sent the women on an equally upward trajectory.

During the 2014-15 season, Alabama men and women set 21 school records. “It is a common misconception that most of our success has come from our sprint group,” says Pursley. “While they have done their share, all of our training groups have equally contributed to our success.

“Some believe that we have had more success with international swimmers than Americans. Although we have signed some high-profile swimmers, much of our progress can be attributed to those who were unheralded coming out of high school. Conventional wisdom would say Connor was too slow and too small to compete at this level,” says Pursley. “The fact is that he’s a consistent trainer in our middle distance group coached by James Barber. With Connor, you don’t often see the highs and lows that you sometimes see in others. He tends to be introverted so you rarely see him ‘front and center,’ but competition absolutely brings the best out in him.

“He loves a challenge—and the bigger, the better. He prefers to let his performance do the talking. As a smaller guy, I think he takes special pride in touching the wall ahead of the big boys. He is also exceptionally versatile and very competitive in back, fly and free in the 50 to 200 range, so we can use him virtually anywhere. He has exceeded everyone’s expectations—except maybe his own—and I am sure that the best is yet to come.”

“Connor is a great example of our academic and athletic excellence. He is a First Team CSCAA Scholar All-American and a biology major who carries a 4.0 cumulative into his junior year. Ever since dissecting a shark in front of his fourth-grade class, he has wanted to become a surgeon,” notes Pursley.

SAMPLE SETS

(Jan. 12, 2015)

Morning LC

The following sample set is one of several sets in the workout, which totaled 6,500 meters:

- 8 x 300s @ 4:10 (Threshold backstroke performed by the entire team)

Oslin held a pretty consistent 4:00 throughout (3:58-4:02 range). “Connor is not as efficient in the long pool,” says assistant coach, James Barber.

Afternoon SCY

The following sample set is one of several sets in the workout, which totaled 6,700 yards:

After a weight room session immediately preceding the water practice, the main set was:
3 rounds of the following:

- 3 x 50s @ 1:40 (sprint free with pads)
- 4 x 25s @ 1:10 (sprint underwater)
- 1 x 200 @ 3:00 (swim backstroke with a sponge sub-threshold—HR between 21-23 for 10 sec)
- 2 x 50s @ 1:00 (sprint backstroke with a deuce—2 sponges)
- 1 x 400 @ 6:20 (active recovery)

Connor held 22-low to 22-mid on the 50s with pads and held 25-low to 25-high on the 50s with a deuce. ♦

PROGRESSION OF TIMES

SCY	Sr. HS	Fr	So	Jr
100 Back	48.99	46.33	45.08	46.00 (Nov)
200 Back	1:50.48	1:42.46	1:40.77	1:41.85 (Nov)



TOTAL ACCESS MEMBERS CLICK HERE

to download the complete workouts of the two sample sets.

HELP WANTED FOR SUMMER SWIM CAMPS

LONGHORNS SWIM CAMP

The Longhorns Swim Camp at The University of Texas at Austin is seeking mature, motivated and team-oriented individuals to be part of its 39th year!

Exciting opportunity to work with world-renown staff: Eddie Reese, Carol Capitani, Kris Kubik and Roric Fink. Guest coaches/speakers include Olympians Ian Crocker, Brendan Hansen, Colleen Lanné-Cox, Garrett Weber-Gale and Whitney Hedgepeth.

Four one-week sessions (May 29-June 24). Room, board, parking, \$600/session salary, up to \$300 travel expense help and NIKE camp apparel package provided. Applicants must agree to work in an alcohol/drug-free environment and must have completed at least 60 hours of college coursework. Competitive swimming and/or teaching/coaching/camp experience required. References, First Aid, CPR and/or Lifeguarding/Safety Training for Swim Coaches must be submitted.

For more information/application, check our employment section at www.Longhornswimcamp.com. Completed applications accepted until positions filled.

The University of Texas at Austin is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability, age, citizenship status, Vietnam era or special disabled veteran's status or sexual orientation.

MICHIGAN SWIM CAMP

The Michigan Swim Camp at the University of Michigan is looking for individuals seeking an opportunity to work with Olympic coach Mike Bottom and staff.

Four one-week sessions (June 12-17, July 10-14, July 31-Aug. 4, Aug. 7-11). Room, board, local telephone plus \$520/week salary and \$125 travel expense help.

Applicants must be 21 years or older, have attended at least two years of college and have experience as a competitive swimmer and/or coach. References, CPR and First Aid certification are required.

For more information and an application, call 734-647-0862, fax 734-763-6543, email: danitans@umich.edu, or write to: Danielle Tansel, Michigan Swim Camp, 1000 S. State St., Ann Arbor, MI 48109.

Candidates must be willing to work in an alcohol/drug-free environment.

NAVY SWIMMING CAMP

COACHES WANTED: two sessions (June 14-18 and June 20-24, 2016).

Spend time in Annapolis in 2016! Room, board and staff shirts are included. Salary is based on experience. Current student-athletes are welcome to apply as well.

Additional opportunities to earn more money at the 2016 Navy clinics on June 18th and 19th.

Send email/letter and resumé with three references to: Coach Bill Roberts, Navy Swimming Camp, 566 Brownson Road, Annapolis, MD 21402 or navyswimmingcamp@usna.edu.

SW: You were USA Swimming's first national team director. What was it that you did in '92, '96 and 2000 that led the USA to the top medal count at the Olympics?

DP: Our international dominance began to unravel in the late '80s, and I believe it was due to a deterioration in both our work ethic and the team concept. Most of my efforts were directed toward doing whatever I could to rebuild these two pillars of our international success.

SW: You've had many accomplishments as national team director—of what are you most proud?

DP: I was proud to be a part of the team effort during my entire tenure, but the 2000 Olympics were especially rewarding. Australia had been closing the gap on us in the first three years of the quadrennial, and they were hosting the 2000 Games in Sydney. They had momentum on their side, and most of the swimming world believed they were poised to take us down.

Instead, our team responded to the challenge and won the most medals in U.S. swimming history—and we did it without any multiple-event superstars. Virtually everyone equaled or exceeded expectations. *Sports Illustrated* said it was the greatest team effort in the history of the sport.

SW: First head coach of the Australian Institute of Sport—how did that come about?

DP: The great Australian coach, Don Talbot, was hired as the first executive director of the AIS. He and I were coaching rival club teams in Nashville and Louisville, respectively, so he was very familiar with my coaching style and track record.

Australia, at the time, was at its lowest ebb of international productivity. I guess he felt I might stir the pot enough to get them moving forward again. We had just come off of a national championship victory in Cincinnati, but the AIS offered an opportunity that was unparalleled. Australia enjoyed a dramatic international comeback in that quadrennium, and it was a great experience for me.

SW: Lakeside, Cincinnati Pepsi Marlins, Canada, Australia, Great Britain, Phoenix. What was it about these opportunities that appealed to you?

DP: All of my moves were motivated by family considerations and/or professional opportunity to fully develop program potential without compromise. In most cases, these priorities pointed in the same direction. When they differed, family considerations trumped professional opportunity.

SW: Lakeside and Mary T.—how did you help her become a champion?

DP: I didn't do anything more for Mary T. than for any of the other swimmers that I ever coached. She was a once-in-a-generation swimmer. We both helped one another realize that perceived limits did not represent reality, and that we were capable of achieving beyond what conventional wisdom would suggest.

She was clearly gifted with the physical and mental attributes required for greatness. My job was to nurture those attributes and design a program beyond the norm that would challenge her to achieve her full potential. She responded without wavering through the peaks and valleys unlike any swimmer I have ever coached. Her example inspired the entire team.

SW: How has breaststroke changed since you won the 200 at SECs in 1969?

DP: We have seen more dramatic progress in the breaststroke than in the other strokes in recent decades because the biomechanics of the stroke have changed more dramatically. We have also discovered that it is truly an individual stroke. So, individual creativity has unlocked the potential for many breaststrokers who would have otherwise been limited by the one-size-fits-all approach to training and technique.

SW: Given your international experience, what's your take on the current Russian drug issue?

DP: I am not currently as intimately involved in the international scene as I was in some of my other positions, so I don't feel that I am qualified to offer an informed opinion of the endemic or systemic nature of this problem in Russia or anywhere else today. All I know is that the use of performance-enhancing drugs and the resulting denial of recognition to the deserving athletes is the most egregious crime in our sport, and we need to commit our best efforts and resources to eliminate it.

SW: As a coach, would you let your open water swimmers compete at the current 10K venue in Rio?

DP: If they were adults, I would make sure they were fully informed of the potential risks and consequences, and then let them make their own decisions—but I would discourage their participation if I felt there was a serious health risk. If they were minors and I believed there was a serious health risk, I would do everything I could to discourage or prevent their participation. ❖

Michael J. Stott is an ASCA Level 5 coach whose Collegiate School (Richmond, Va.) teams have won eight state high school championships.

UP & COMERS

AGE GROUP SWIMMER OF THE MONTH

STORY AND PHOTO BY TAYLOR BRIEN

BRETT FEYERICK

Twelve-year-old Brett Feyerick of Nation's Capital Swim Club has already put together an impressive list of swimming accomplishments, his most recent being a national age group record in the 11-12 boys 50 yard back. Feyerick dashed ahead of the competition to stop the clock at 24.22 at NCAP's own invitational last December. That bettered the previous mark of 24.56 set by Destin Lasco in 2014.

Feyerick's coach, Sue Chen, notes that he "has great underwater dolphin kicks and a natural awareness of his body in the water."

Not only is Feyerick an NAG record holder, but he also currently holds the top U.S. ranking in his age group for the 50, 100 and 200 yard free (22.73, 49.10, 1:47.99), as well as the 50 and 100 back (24.22, 52.80) and 100 IM (55.37). *Reach for the Wall*, an organization dedicated to the coverage of swimming in the D.C. area, named him Male Junior Athlete of the Year for 2014, while the Potomac Valley has named him PVS Swimmer of the Year for the past three years (ages 9-11).

Outside of the pool, Feyerick is an honor roll student who enjoys singing with his middle school choir. Success also runs in the family with Feyerick's great cousin, Ferdinand Feyerick, winning a bronze medal in fencing for Belgium at the 1908 London Olympic Games. ❖



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WHAT IS THE BEST THING YOU DO IN SWIMMING?

I always like to have good results, so I am consistent with transferring everything that I work on in practice to my meets.

WHAT ARE SOME OF THE TOUGHEST SETS YOU'VE DONE?

- 3000 for time (every month)
- 40 x 100 on 1:15

WHAT IS YOUR FAVORITE THING ABOUT SWIMMING?

No matter what team you are on, everyone is part of the swim community. After I broke the 11-12 50 (yard) back NAG at the NCAP Invite, Reece Whittle—who I had never met before—was the first person to congratulate me behind my lane!

WHAT ARE YOU MOST LOOKING FORWARD TO THIS YEAR?

Not only improving on my own swimming as I age-up into the 13-14 age group, but I am also extremely excited to become an athlete mentor and help volunteer for Maryland Special Olympics.

WHO IS YOUR SWIMMING IDOL...AND WHY?

Without doubt, my fellow NCAP teammate, Katie Leddecky. I get to see how hard she works in practice and how much that has paid off for her. She is a great example of someone who has made tough sacrifices for something she really loves.

WHAT ARE YOUR FAVORITE HOBBIES?

I am a big New York Giants fan along with my dad. We love to watch every game! Going to the movies, playing Xbox with my friends and reading. I really liked reading "Catching Fire" (of "The Hunger Games" series). But most of all, spending my free time with friends and family is a huge part of my life...and that plays a big role in the support of my swimming.



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AL MARKS /

Pre-National Coach,
San Antonio Wave,
Texas

“Competition has made our sport great. By keeping the cuts the same/nearly the same, you are motivating many college swimmers and recent college graduates to pursue the Trials. This makes for a far better competitive situation for swimmers in all parts of our country.”



SAM BUSCH /

Assistant Coach,
University of Virginia

“Though I understand it is a great experience for the younger athletes, I believe the qualifying standards should still be significantly lower. I am a big believer in quality over quantity—and in this case, there is certainly no exception.”

WHAT'S THE OBJECTIVE OF U.S. OLYMPIC TRIALS?

BY ANNIE GREVERS

DO YOU THINK THE OLYMPIC TRIALS CUTS SHOULD BE MADE FASTER FOR THE SOLE PURPOSE OF SELECTING AN OLYMPIC TEAM...OR DO YOU FEEL CUTS SHOULD REMAIN THE SAME, PROVIDING A MOTIVATIONAL EXPERIENCE FOR ALL QUALIFIERS?



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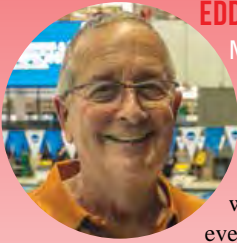
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[PHOTO BY PETER H. BICK]



EDDIE REESE /
Men's Head Coach,
University of Texas

"I do know this: out of the 50 Olympians we get, only one or two ever make the team that didn't go to the previous Trials. I would like to not have 2,000 people, but I know it's an honor to be there. I'd like to have between 1,300 to 1,500.

"Long Beach had 680; that wasn't good. Eleven percent of women and 15 percent of men improve their times at Trials—not my definition of a happy place. If we had easier cuts, where people could make them without putting their season on the line, that percentage would go up.

"Cuts are fast this year—if you make it faster, swimmers will meet it."



PAUL SMITH /
Owner-Director
of Coaching, Mesa
Aquatics Club,
Arizona

"Great question...and one of the always entertaining debates whenever you get a group of coaches in a room together because the different camps are VERY passionate about their positions!

"I fall in with the side that believes that when you get to Trials, the time standards should be the fastest of any meet in the country and align with a 'stepping stone' progression from sectionals to juniors to seniors and finally OT. Having more than a thousand athletes tells me (the cuts) should be faster."



DAN SCHEMSEL /
Assistant Coach,
University of
Wisconsin

"My short response is that I think the cuts can be a bit faster. The standards should be obtainable to the upper-middle portion of the swimming population to keep them hungry to make the next step, while also maintaining the integrity of the meet by finding the best in our country.

"While we have done that, I think we could limit the number of participants a bit more to favor the side of the elite." ❖

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PARTING SHOT



CATCH ME IF YOU CAN: New Zealand's Kane Radford successfully kept his competition at "arm's length" during the 5K open water race at the New Zealand Open Water Championships in January at Lake Taupo. This is the fifth consecutive year the 25-year-old has been the national open water champion (2012-16) in both the 5K and 10K.

[PHOTO BY SIMON WATTS, BW MEDIA PHOTOGRAPHY]