

THE TRAINING ISSUE

# SW

SWIMMING WORLD

FEBRUARY 2014 - VOLUME 55 - NO. 02

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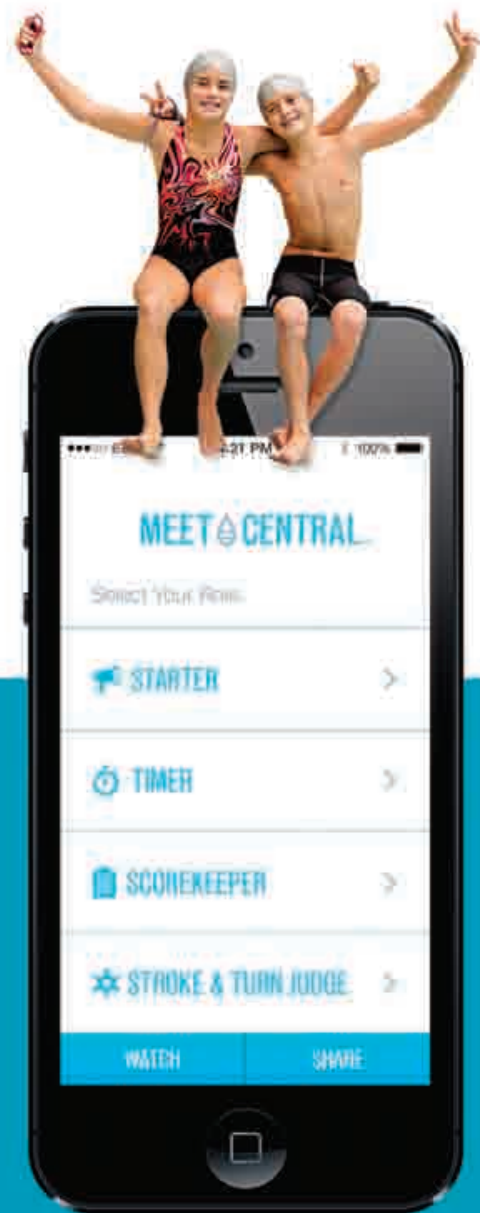
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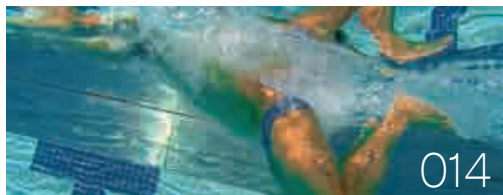
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## FEATURES |

### 010 | **Dryland for Kids: Waiting on Weights (Part I)**

by *Michael J. Stott*

*Swimming World* introduces the first of a three-part series on dryland training for developing swimmers. It is designed to address the fundamental questions posed by parents and swimmers about when to start and what to expect once the process is begun.

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by *Jeff Commings*

Breaststroke times have gotten faster as athletes find ways to make the slowest stroke more efficient. The breaststroke kick is the latest segment to undergo an adjustment, as swimmers are leaning toward a more narrow kick. Although some power in the kick is lost, the reduced drag creates a smoother stroke and better speed consistency and maintenance.

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In honor of her coach and close friend who died from cancer, swimmer Alli DeFrancesco—herself a cancer victim who became cancer-free after surgery and chemotherapy—successfully crossed the English Channel in her memory.

### 056 | **Goldminds: Transition Points**

by *Wayne Goldsmith*

A transition point is a stage in your swimming career where your level of achievement is determined by the decisions and choices you make in your training every day.

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## ON THE COVER |

Following his golden performance in the 100 meter freestyle at the 2012 London Olympics, the media dubbed Nathan Adrian as the "All-American Athlete." Despite a disappointing performance at last year's World Championships, the superstar sprinter still has great expectations for 2014 and beyond.

(See story, page 23.)

[PHOTO BY PETER H. BICK]

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# WORLDWIDE RESPONSE TO FINA

BY BRENT T. RUTEMILLER

In the January issue of *Swimming World Magazine*, we published an open letter to FINA asking it to recognize all Olympic victims during the DDR era. We also solicited the worldwide swimming community to join our request. Signatures and comments came from around the world asking FINA to do the right thing.

Here are a few of the most impactful comments:

*"As a former Olympic swimmer (1972), I feel this would be a wonderful and fair way to put a line under the past and to show humanity and compassion to all 'victims' of this sad time in our sport."* —**Diana Nash, UK**

*"I was an announcer for ABC during the First World Swimming Championships in Belgrade and then during the Montreal Olympics—it was a sad time for the sport and for the victims on both sides of this issue. I also helped lobby for the establishment of WADA and USADA as a consultant to President Clinton's Drug Czar General McAffrey. It is time to do the right thing and lead the way for other federations to follow. I love sport and swimming. We need to do what is right."* —**Donna de Varona, USA**

*"I honestly believe that victims are helped when the results (medals, records, etc.) obtained through deceit by their country and federation are no longer recognized. It's like a burglar giving back what he has stolen!"* —**Hans Elzerman, Netherlands**

*"The IOC should be consistent; it has been disqualifying Olympic athletes for many Olympiads for using illegal drugs. There is more than enough legal evidence available. This has been widely reported in German media, and there have been numerous court cases where this information has been made public. The entire private records of Dr. Lothar Kipke of the DhFK Leipzig were seized in his home following the collapse of the GDR, and in his carefully documented notebooks, the information is all there, in terms of days, dates, dosages, athletes. How much more evidence is needed?"* —**Andrew Strenk, USA**

*"I, too, was a member of the '72 and '76 Olympic team as a diver. The injustices need to be corrected as best possible, and this is one way to act to do so."* —**Cynthia Potter, USA**

*"I was the information officer for Canada's swim team at the 1976 Olympic Games, saw the performances first-hand, and share the outrage for the Canadian swimmers who were wrongfully denied at least several medals, possibly gold. As a result, for many years, Canada held the dubious distinction, unfairly, of being the only host nation not to win an Olympic gold medal."* —**Sheila Robertson, Canada**

*"Olympic glory should know no statute of limitations. Time passed should not be an excuse to deny those wronged the opportunity to taste that glory. I support the idea of duplicate medals and the formal acknowledgement that the IOC's inability to monitor this widespread conspiracy allowed it to occur in the first place."* —**Marc Carman, USA**

*"We cannot re-write history, but by acknowledging it, we can change the present and the future."* —**James Nickloff, USA**



These are only a few of the comments that have been pouring in every 10 minutes from countries such as Russia, Philippines, Ireland, India, Korea, Brazil, Denmark, Italy, Sweden, Uganda, Australia and Germany. We continue to ask athletes, coaches, parents, officials and governing bodies to join our efforts by signing the petition at [www.Change.org](http://www.Change.org). Search for *Swimming World* or FINA. ♦



**Brent T. Rutemiller**  
 Publisher of *Swimming World Magazine*



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# WAITING on WEIGHTS

BY MICHAEL J. STOTT

PHOTOS PROVIDED BY UNIVERSITY OF CALIFORNIA

**SWIMMING WORLD INTRODUCES THE FIRST OF A THREE-PART SERIES ON DRYLAND TRAINING FOR DEVELOPING SWIMMERS. IT IS DESIGNED TO ADDRESS THE FUNDAMENTAL QUESTIONS POSED BY PARENTS AND SWIMMERS ABOUT WHEN TO START AND WHAT TO EXPECT ONCE THE PROCESS IS BEGUN.**



Over the next three issues of *Swimming World* (February, March and April), the magazine will provide answers about dryland training for kids from three experts in the field:

- **Nick Folker** (left), founder of Bridgeathletic and former strength and conditioning coach at Cal;

- **Keenan Robinson**, director of athlete services at North Baltimore Aquatic Club and former chief athletic trainer for the Michigan men's 2013 NCAA national swimming and diving champions;

- **Richard Hunter**, 13-14 age group director for the Mission Viejo Nadadores.

In Part I, Folker, trainer of Olympic champions Natalie Coughlin and Nathan Adrian—among others—shares his experience on this essential but often overlooked aspect of swim training:

**Q. SWIMMING WORLD:** *What's your general view on weights and dryland for youngsters?*

**A. NICK FOLKER:** I am a huge proponent of dryland for young kids, not just athletes. They need to be taught how to move proficiently. More importantly, they just need to move.

For young swimmers, swimming often “chooses” them, not vice versa. They may have tried land sports and not enjoyed the experience or just felt lost, especially when other variables—such as a ball or bat—were introduced. I believe correct movement patterns need to be taught at a young age, which in turn translates into improved overall athleticism and better swimmers.

Weights can be introduced once the athletes have progressed through a number of phases of body weight and resistive band work and have passed a variety of assessments.

**SW:** *At what age should a coach start an athlete on dryland?*

**NF:** Dryland in swimming is often misconstrued as the need to run around the pool deck or work up a sweat in order to feel fulfilled in “getting fit.” Swimmers, especially at a young age, do enough yardage, so there shouldn't be a need to do more yard-

age on land unless they're training for a triathlon.

I don't believe there is a magic number or age to start dryland. I have worked with swimmers as young as 9 and 10 years old. I like to use dryland as a progression. It starts with corrective exercises based on my assessments of the athletes. From there, I progress into more athletic movements—including multi-planar exercises—to work on their coordination and motor learning. Core work is often performed through exercises such as lunges versus just crunches. We do some exercises on the ground for base work, but core work does not mean just lying on the ground doing crunches or V-ups.

**SW: On weights?**

**NF:** As the athlete progresses through the system and passes more levels in the assessment process, I prescribe more complex exercises and movement patterns. I introduce medicine balls and light weights such as dumbbells, but only when their joints can handle the load. The barbell comes at a later progression—especially in exercises such as squats that are adding a load to the spine—and when the athlete has decent thoracic mobility to handle the load.

**SW: What are the indicators that an athlete may be ready for weights?**

**NF:** Let me define weights as I use them. Weights do not mean the leg press or squats and bench press with a barbell. Weights can mean performing a shoulder routine with a can of vegetables or doing lunges with a 1.25-pound dumbbell in each hand if that is what the athlete is ready for.

An example of an indicator is being able to perform a lunge—forward, lateral and reverse—without wobbling, and by being fluid in the movement in each direction. This means not making each lunge a sticky two- or three-part movement.

Other indicators include being able to perform a single-leg quarter squat with the knee tracking in line, or performing multiple push-ups with the scapulars tracking correctly and the lower back looking like an ironing board.

Unfortunately, too many swimmers get to college without being able to do most of these basic movements and are thrown into being expected to perform loaded squats, bench press and deadlifts with no progression or introduction to the required movement or load.

It's a very flawed system in that you have some of the top athletes in the world unable to perform multiple sets of quality push-ups or a reverse lunge without falling over. Young athletes also need to work on proprioception: learning how to roll and tumble and move through space.

**SW: Is the introductory timing different for boys and girls?**

**NF:** The introductory timing may not be different, but the prescription and progression is very different.

**SW: Initially, should dryland just be bodyweight stuff?**

**NF:** One cannot get enough of bodyweight work. Until you can control your own bodyweight and learn to move it efficiently through multiple planes, you have no business doing weight



**PICTURED** NICK FOLKER IS THE FOUNDER OF BRIDGEATHLETIC AND FORMER STRENGTH AND CONDITIONING COACH AT CAL. FOLKER HAS TRAINED OLYMPIC CHAMPIONS NATALIE COUGHLIN AND NATHAN ADRIAN.

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– continued on 12

training at an early age. Once you can do this, you can progress over time to where some of my 6-5 guys are moving more than 300 pounds on deadlifts and bench pressing with dumbbells between 115 to 160 pounds in each hand. That all comes with a solid foundation.

**SW: Any suggested initial dryland exercises?**

**NF:** They should be based on the individual athlete. Some general exercises are lunges—starting with a reverse—using a support such as a handrail because every time you take a step, you are loading the joints of that single leg with your mass; wall sit; body weight squat; monster walks; front bridges (planks); back bridges (planks); kneeling push-ups; supine/inverted row where the bar is at chest height; Spiderman walks; body weight Romanian Deadlift (RDL) or Good Morning; cat and dog for spine and hips—the list goes on.

**SW: How about suggested initial weight exercises?**

**NF:** DB (Dumbbell) Deadlift with a knee band; goblet squats with a knee band; Swiss ball wall squat with a dowel to teach the overhead squat movement; DB bench press on the floor—purely as a teaching tool, not a loading exercise; supine row; split-stance DB row; medicine ball or DB walking lunges; DB step-ups.

**SW: Frequency?**

**NF:** Frequency depends on the swimmer's events and dryland/weightlifting experience. In general, young athletes can do some form of dryland three to five times per week. If you've ever watched kids play outside or on the jungle gyms, they can go forever, so they can handle doing some form of movement in an instructional setting up to five times per week.

Always include a game or two somewhere in the week for variety, and keep them enjoying the dryland, or make the dryland a game. Always make sure that the dryland volume or intensity correlates to the demands being placed on the swimmers in the water.

**SW: What are some do's and don'ts of dryland and weights?**

**NF:** Do's: assess the athletes whenever possible, especially as they go through puberty. Make sure you write their dryland as a progression. Each exercise must have a why and a where-to when prescribed. Dryland isn't a quick-fix or 90-day program; it is a work-in-progress. Ask people who have experience and knowledge in the field.

**Don'ts:** don't just do it because it looked cool online or you saw it somewhere. You don't coach that way in the pool. Why should dryland be any different? Don't load your young athletes too soon. I know what that feels like. I only grew at 19, so any load was a huge challenge to me. ♦

## BECOME A BETTER SWIMMER... BEGINNING TODAY!

EDITOR'S NOTE: THE FOLLOWING IS AN EXCERPT FROM THE BOOK, "BELOW THE SURFACE," BY BRENT T. RUTEMILLER, PUBLISHER AND CEO OF SWIMMING WORLD MAGAZINE.

We're already one month into the new year, and there's no better time than *now* to commit to becoming the best competitive swimmer you can be. Here are 30 daily training guidelines to help you reach that goal.

1. Attend 100 percent of the practices, even when unable to physically participate.
2. Call the office when running late to practice.
3. Have equipment available and adjusted before every practice.
4. Arrive 10 minutes before practice time to fill water bottle, find equipment, check mailbox, return meet entries and review workout.
5. Use restroom before practice.
6. Perform each stretching and strength exercise exactly as taught.
7. Never walk on the bottom of the pool or bob during warm-ups and warm-downs.
8. Streamline, pullout, then breathe when pushing off the walls.
9. Perform legal butterfly from wall to wall.
10. Perform legal backstroke-to-breaststroke turns in practice.
11. Perform backstroke kick with hands locked overhead from wall to wall.
12. Perform set with consistency and controlled breathing patterns.
13. Perform an underwater pullout on every breaststroke start and turn.
14. Begin each repeat precisely on time and finish off of the bottom.
15. Perform all drills exactly as instructed.
16. No switching kicking strokes during kicking drills.
17. No talking during drill instructions.
18. No hanging on the lane lines.
19. No chewing gum in practice.
20. Finish each training set all the way to the wall with a good touch.
21. Flip all freestyle and backstroke turns legally (no open turns).
22. If you have to stop—always stop in front of the coach.
23. If your equipment fails, train without it.
24. Always have an extra set of racing goggles.
25. Breathe 3-cycle in training when swimming freestyle.
26. Stay an extra 10 minutes after each practice to help store equipment.
27. Maintain proper eating, sleeping and study habits.
28. Use ear drops to prevent ear infections.
29. Ice sore muscles.
30. Be a teacher. ♦



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# BREASTSTROKE KICK

BY JEFF COMMINGS

PHOTOS BY CHRISTOPHER RATTRAY • DEMONSTRATED BY EETU KARVONEN

**BREASTSTROKE** HAS SEEN MANY CHANGES IN THE PAST 50 YEARS. RULES HAVE CHANGED AS THE STROKE EVOLVED, AND TIMES GET FASTER AS ATHLETES FIND WAYS TO MAKE THE SLOWEST STROKE MORE EFFICIENT. THE BREASTSTROKE KICK IS THE LATEST SEGMENT TO UNDERGO AN ADJUSTMENT, AS SWIMMERS ARE LEANING TOWARD A MORE NARROW KICK. ALTHOUGH SOME POWER IN THE KICK IS LOST, THE REDUCED DRAG CREATES A SMOOTHER STROKE AND BETTER SPEED CONSISTENCY AND MAINTENANCE.



*Eetu Karvonen won the 100 and 200 yard breaststrokes at the 2012 and 2013 NCAA Championships, setting Division II records in both while swimming for Grand Canyon University. He represents Finland internationally, most recently competing in the semifinals of the 50 breast at the World Championships. Read his blog at [www.eetukarvonen.com](http://www.eetukarvonen.com).*



#1

## #1 LIFTING THE ANKLES

At the start of the kick, lift the ankles toward the butt, not spread the knees. The farther the knees go outside the bodyline, the more drag there will be. A good drill to work on this is kicking breaststroke with a pull buoy. If you do not lose the pull buoy, you are on your way to an efficient kick!



#2

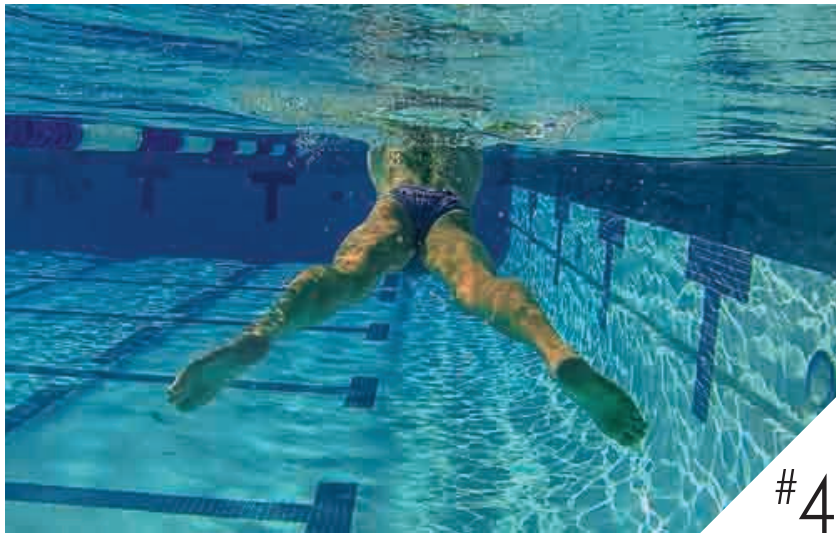
## #2 STARTING THE KICK

Besides not spreading the knees at the start of the kick, don't drop your knees and create a deep angle with your hips. To avoid breaking the surface with your feet on the recovery, press down and forward with your hips.



### #3 PROPULSION PHASE

As you start the propulsion phase of the kick, make sure to press on the water with the bottom of your feet, not the sides. Since there is more surface area on the bottom of your feet, you'll push more water this way.



### #4 EXTENSION PHASE

Most children are taught breaststroke kick with the mantra of "Up, Out, Together." The first and third parts of that are correct; the second is not. Kicking outward will not get you moving forward. Instead, feel like you are kicking "Around and Back." When your legs are fully extended at the end of the kick, you should feel a slight tug in your legs toward the wall behind you, not toward the side. Kicking with a pull buoy will help you feel this motion as well.



### #5 FINISHING THE KICK

Don't be lazy at the end of the kick! Your legs should touch at the knees, ankles and feet when the kick is done. Do not go into the glide part of the stroke with feet separated.



### #6 GLIDE PHASE

Another sign of lazy legs at the end of the breaststroke kick is letting them drop. Keep a flat bodyline from your fingers to your toes to maximize distance on the glide phase! ♦

# SWIMMING TECHNIQUE MISCONCEPTIONS

# HIP ROTATION

BY ROD HAVRILUK

THE PERCEPTION THAT ALL THE TECHNIQUE ELEMENTS OF FAST SWIMMERS ARE EFFECTIVE HAS RESULTED IN THE ADOPTION OF NUMEROUS INEFFECTIVE TECHNIQUE ELEMENTS. IN REALITY, THE FASTEST SWIMMERS ARE OFTEN ABLE TO OVERCOME THEIR TECHNIQUE LIMITATIONS BECAUSE THEY ARE VERY STRONG AND VERY WELL-CONDITIONED. THE TWOFOLD PURPOSE OF THIS SERIES OF ARTICLES (PRINT AND ONLINE) IS TO ADDRESS SCIENTIFICALLY THE TECHNIQUE MISCONCEPTIONS THAT HAVE BECOME “CONVENTIONAL WISDOM,” AND TO PRESENT MORE EFFECTIVE OPTIONS.

*Swimming Technique Misconception: In freestyle, hip rotation increases hand force.*

## BACKGROUND

It is true that the highest hand force values are achieved during the push phase as the hip rotates upward. However, the misconception is that hip rotation can *cause* an increase hand force. In fact, the opposite is true: Jan Prins (2007) summarized that an emphasis on hip rotation can reduce the ability to generate force.

Hip (or torso) rotation and hand force are both important factors for freestyle performance. In books published 35 years apart, James “Doc” Counsilman (1968) and Ernie Maglischo (2003) similarly explained the benefits of torso rotation as facilitating the recovery of one arm while improving the position of the opposite arm to better generate force. Research has shown the benefit of hand

force as increasing swimming velocity (e.g., Rod Havriluk, 2004). While the benefits of both hip motion and hand motion are straightforward—and clearly supported by science—the relationship of hip motion and hand motion that optimizes performance is more complicated.

## TYPICAL RELATIONSHIP OF HIP ROTATION AND HAND MOTION

It is typical—and natural—to rotate the hip upward simultaneously as the hand pushes back. Unfortunately, it is also natural for the elbow to move upward as the hip rotates upward. Upward motion of the elbow pulls the hand upward, resulting in less backward hand motion and less propulsion. **Fig. 1 (top of third column)** shows a swimmer with a very effective arm position at the beginning of the push phase. By attaining this strong

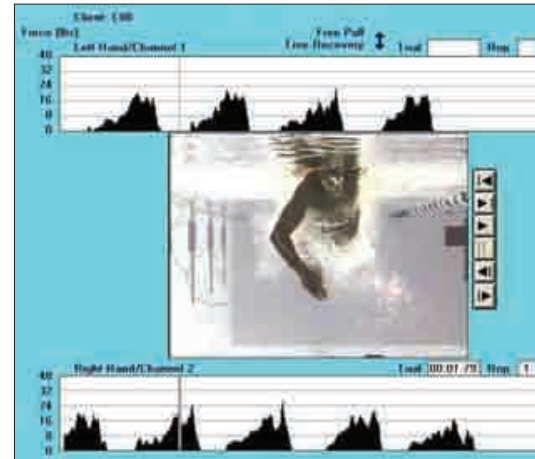


FIGURE ONE

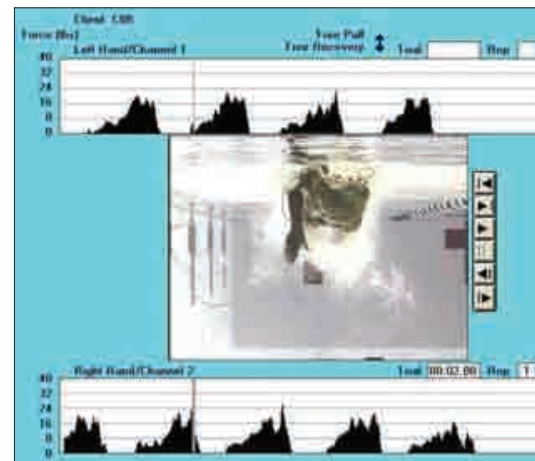


FIGURE TWO

**FIG. 1 >** (TOP) AS THIS SWIMMER BEGINS THE PUSH PHASE, HIS ARM IS IN AN EFFECTIVE POSITION. HE HAS INCREASED HIS HAND FORCE TO ABOUT 20 POUNDS. (THE VERTICAL GRAY LINES ON THE FORCE CURVES ARE SYNCHRONIZED WITH THE VIDEO IMAGE.)

**FIG. 2 >** (ABOVE) AS THIS SWIMMER COMPLETES HIS PUSH PHASE, HIS ELBOW IS BREAKING THE SURFACE, AND THERE HAS BEEN LITTLE CHANGE IN THE HAND FORCE.

position, he was able to increase his hand force to this point.

As his hand pushes back (**see Fig. 2, above**), his hip rotates upward and his elbow moves upward, breaking the surface and pulling his hand upward. Because his hand moves upward and sideward more than backward, the hand force does not continue to increase. The swimmer shows a coordination of the hip rotation and hand motion on the push phase that is natural, simple and, unfortunately, ineffective.

## EFFECTIVE RELATIONSHIP OF HIP ROTATION AND HAND MOTION

An effective relationship of hip rotation and hand motion is not natural or simple. To maximize hand force during the push phase, the hand must push backward beneath the leg in synchronization with the upward hip rotation. While the timing of the hip and hand motions is simultaneous, the direction of the hip and hand motions is different.

The swimmer in **Fig. 3 (at right, top)** has an arm position similar to the swimmer in Fig. 1 and has similarly increased his hand force to this point. However, he continues to push his hand backward as his hip rotates upward (see **Fig. 4, at right, bottom**). Because his hand motion is primarily backward, his elbow stays submerged, and his force increases to about 50 pounds. On many strokes in the displayed image, his peak force is as high as 60 pounds.

## MISCONCEPTION ABOUT SUMMATION OF FORCES

Certainly, the natural inclination to move the hand and hips at the same time and in the same direction would contribute to the perpetuation of this misconception. There have also been attempts to justify the biomechanics. For example, an article on “propulsion generated from the hips” used hip rotation by a baseball batter as an analogy (Bob Pritchard, 1993). Many sport movements take advantage of the concept of “summation of forces” in which adjacent body segments (e.g., torso, upper arm, lower arm, hand) sequentially rotate in the same direction (as in batting) to produce maximum force.

In freestyle swimming, however, the hip is not adjacent to the arm, and the upward hip rotation is not in the same direction as the backward arm motion, so hip motion cannot contribute to hand force production.

## SUMMARY

During the push phase of freestyle, backward hand motion occurs

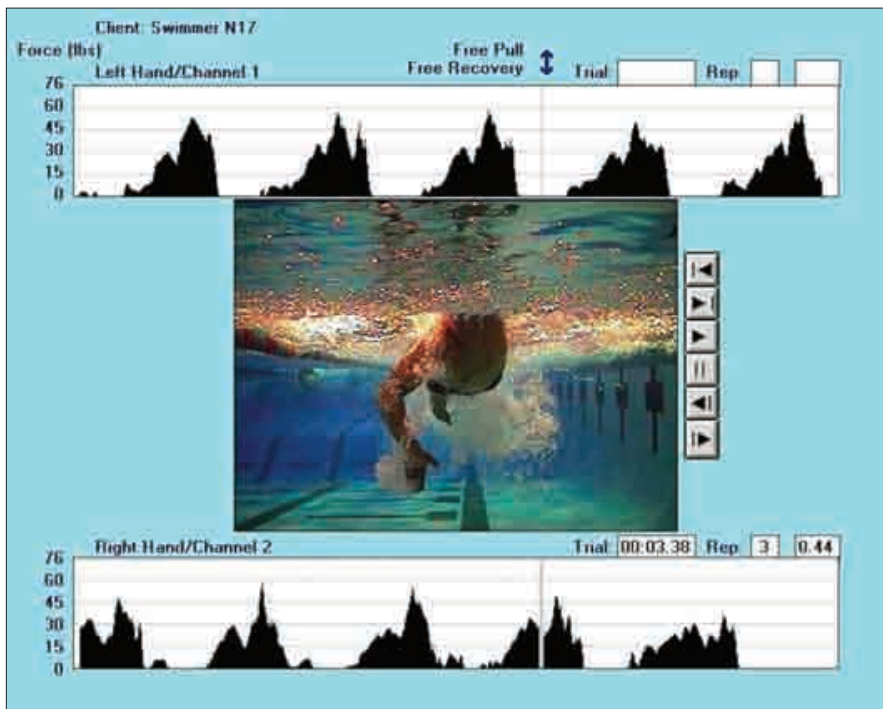


FIGURE THREE

simultaneously with upward hip rotation. The natural—and ineffective—tendency is to move the elbow upward as the hip rotates upward.

To maximize hand force, however, it is necessary to push the hand backward while limiting upward motion of the elbow. If the hand moves primarily backward, the elbow stays submerged; the hand finishes the push beneath the leg, and hand force increases.

In contrast, an emphasis on hip rotation is likely to contribute to the natural tendency for the elbow to move upward, pulling the hand upward and decreasing the ability to generate force. ♦

*Dr. Rod Havriluk is the president of Swimming Technology Research (Tallahassee, Fla.) He also presently serves as president of the International Society of Swimming Coaching. He can be reached at the STR website: [www.SwimmingTechnology.com](http://www.SwimmingTechnology.com).*

*Swimming World readers are encouraged to visit [www.SwimmingWorldMagazine.com](http://www.SwimmingWorldMagazine.com) regularly to read more of Dr. Havriluk's articles on swimming technique misconceptions.*

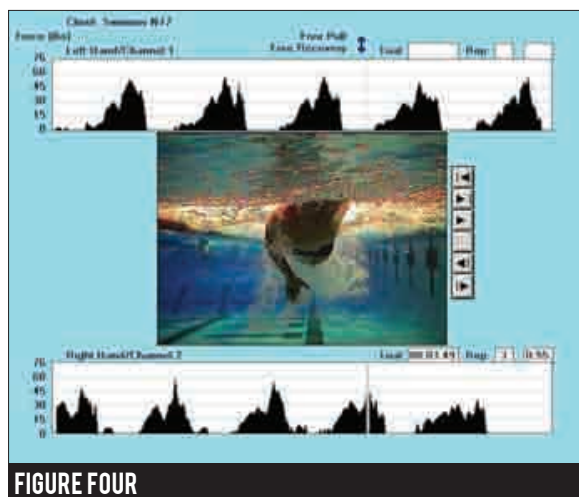


FIGURE FOUR

FIG. 3 > (TOP) AS THIS SWIMMER BEGINS THE PUSH PHASE, HIS ARM IS IN AN EFFECTIVE POSITION SIMILAR TO THE SWIMMER IN FIG. 1.

FIG. 4 > (ABOVE) AS THIS SWIMMER COMPLETES HIS PUSH PHASE, HIS HAND MOVES BACKWARD BENEATH HIS LEG, KEEPING HIS ELBOW SUBMERGED AND INCREASING HIS FORCE TO ABOUT 50 POUNDS.

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# The Singer, Not The Song

STORY AND PHOTOS PROVIDED BY CASEY BARRETT

## WELCOME TO IMAGINE SWIMMING, NEW YORK CITY...

**M**y daughter, Eva, turned 3 last month. Every Thursday morning at 9:20, she leaps laughing into the warm water of our TriBeCa Flagship pool and paddles over to her teacher, Hunter. Like all the other children in our school, Eva phased out of our Parent & Me classes as her third birthday approached. Now she's been in a "big girl" class for a few months, and Hunter has become a bit of a celebrity at home.

Today, Eva dropped off a sticker-covered Christmas card for him. Yesterday, while sitting on the potty, she demonstrated her perfect streamline position for her mom. "Hunter taught me that!" she proudly proclaimed.

Like every teacher on the Imagine staff, Hunter has quite a bit of freedom in what and how he teaches. I'm one of the two owners of Imagine Swimming, and when I sit down to watch Eva's class each Thursday morning, I don't have any idea what exactly Hunter will be working on that day. If you're a part of the swim school industry, that probably sounds insane. Maybe even irresponsible.

### COMMON SENSE

At Imagine, we think of it as common sense.

My partner, Lars Merseburg, and I look at our jobs as leaders of our 100-plus staff fairly simply: we look to hire the best, train them to be even better...and then we get out of their way. We want to give great aquatic educators the tools and the resources to perfect their craft, but we also want to give them the freedom to enjoy doing it their way.

This is far from common sense in the swim school industry. The art of learning to swim is generally taught through specific curriculums and a checklist of skills and levels. That is, it is taught based on the "Song." At Imagine, there are still levels and expectations of progressions, but curriculums are looked at as loose outlines, not strict guidelines. In Imagine lessons, it's all about the "Singer."

"The thought of teaching each class exactly the same according to a set-in-stone lesson plan—that sounds really boring," says Merseburg. "Not just for the kids, but also for the teachers. It sounds like factory work."

When the two of us founded Imagine back in 2002, we started with a wealth of competitive experience...and little hands-on teaching experience. Merseburg was an NCAA champion and a team captain at Cal prior to moving to New York City in 2001; I was an Olympian for Canada in 1996, and arrived in the city seeking a career in journalism. When we both landed in jobs we hated, stuck behind cubicles, we rejected the corporate path and bet our futures on building a swim school. Imagine was our way of taking back control of our lives. Maybe it was natural for us to reject many of the central tenets of how, exactly, children learn to swim.

Imagine was built, from our first lessons back in 2002, based on an unwavering premise: that kids learn best through play, and that it's all about learning to love the water. Got a checklist of goals for a group of 4-year-olds? We figured out quickly how well that worked. Want to force away a kid's fear by just tossing him in there? Enjoy the tears and the weeks of clinging screaming that follow.

## FREEDOM AND LAUGHTER

Instead, with a bit of freedom and a lot of laughing, we learned that kids progressed—and became safer in the water, faster—when the lessons were rooted in play.

Little did we know that we had stumbled upon one of the central premises of early education. Kids learn best through play, whether they're in the pool, the sandbox, their bedroom or the classroom. Take a moment and Google “learning through play,” and scan the countless articles and studies that support that earliest educational truth.

Then why aren't children taught that way in all of their early activities?

Well, maybe because play means freedom, and freedom means trust. Trusting employees to know what's best in the moment, when they're working with young kids? That sounds like a scary way to operate—and grow—a business, doesn't it? Many swim school owners are probably shuddering at the thought.

Except, when you know how to find and train the right people, there's nothing scary about it. It quickly becomes a self-perpetuating system of talented teachers who appreciate the respect that this trust entails.

“New York City is filled with countless creative types chasing different artistic ambitions,” says Merseburg. “There are actors and writers and artists and musicians everywhere. A lot of them used to be swimmers, or maybe taught lessons when they were teenagers. We can offer them a good gig, where they get more respect than waiting tables. And they have more fun, too.”

Indeed, New York City is a central character in Imagine's identity and philosophy. It's a city filled with singers—talented, ambitious folks eager to find their voice. As the school grew, forcing teachers into a strict curriculum of checklist teaching never felt like an option. Yet, as more instructors took to the water, Imagine's training program was forced to evolve with them.

“We can offer more freedom because we demand so much training,” says Brendan O'Melveny, Imagine's director of staff training. “In jazz, you're taught: learn the rules, then break them. That's a guiding philosophy with our staff.”

The jazz-trained O'Melveny brings that

musician's ear to his training courses—which involve lengthy classroom sessions, 40-plus hours of in-water training and, most of all, no promises once the training is complete.

“It's not a degree they're getting by training with us. No one is promised any shifts for going through our training,” he says. “It's proving they get it...that they know swimming and that they can translate it in any number of ways for any number of kids.”

## GROWING FAST AND TRAINING GREAT TEACHERS

Imagine Swimming currently welcomes more than 3,500 children each week to its 13 pools in Manhattan and Brooklyn. The staff recently surpassed 100, and the school is actively hiring. However, Merseburg acknowledges that enrollment could be much higher.

“We can only grow as fast as we find and train great teachers,” he said. “At many locations, we can't fill demand, we can't expand fast enough for parents. But what if we started sacrificing our training, what if we started hiring sub-par teachers?”

He trails off and shakes his head at the

thought. The school has grown to become the largest learn-to-swim program in New York City, but after 12 years in business, it's still getting started.

Merseburg's 3-year-old son, Oskar, is also one of those kids leaping laughing into that TriBeCa pool each week. He swims with a teacher named James, a scuba-diving Englishman, who's also become a celebrity at home.

Does his dad have any idea what Oskar does at swimming each week?

“He swims, he laughs...I don't know...I let James handle it. He knows what he's doing.” ♦

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**Casey Barrett, along with Lars Merseburg, co-founded Imagine Swimming—for children ages 6 months to 12 years—in 2002.**

**Barrett has won three Emmy awards and one Peabody award for his work writing and producing the Olympics on NBC. In college, he was a nine-time All-American at the University of Southern California and Southern Methodist University. He also was a member of the 1996 Canadian Olympic team in Atlanta, where he placed 11th in the 200 fly.**

**PICTURED** > “WITH A BIT OF FREEDOM AND A LOT OF LAUGHING, WE LEARNED THAT KIDS PROGRESSED—AND BECAME SAFER IN THE WATER, FASTER—WHEN THE LESSONS WERE ROOTED IN PLAY”: DORI (BELOW) TEACHES ONE OF HER KIDS HOW TO STREAMLINE, WHILE OSKAR (PREVIOUS PAGE) GETS A PIGGY-BACK RIDE FROM HIS TEACHER, HUNTER.



# OVERTRAINING IN ELITE SWIMMERS

STORY AND PHOTOS PROVIDED BY GRANT C. SMITH

## AN ANALYSIS OF FACTORS THAT CAUSE OVERTRAINING IN ELITE SWIMMERS IN RESPONSE TO RESISTANCE TRAINING.

Overtraining is a multifaceted diagnosis that has been found to affect 37 percent of elite swimmers between the ages of 16-20.

Swimmers most readily engage in a combination of strength and endurance training in order to elicit gains in performance. Concurrent training in bouts of high volumes and intensities leads to many to become overtrained. This diagnosis is given to those who see decrements in performance due to the lack of appropriate time to recover from these conditions prior to competition.

Overtraining includes physiological and psychological factors that work synergistically to hinder the performance of elite swimmers.

### TRAINING SCHEDULE

Swimmers most readily take part in a concurrent training program, performing both resistance and endurance training. For most of the year, training takes place six days a week with a frequency of one to three times per day for a duration of one to three hours each.

The volume of training depends on an individual's race specialty:

- Sprinters, defined by those whose best events include the 50 freestyle and the 100 of any stroke, usually perform 2,000 to 6,000 yards per practice.
- Middle-distance swimmers are those whose best events include the 100 and 200 of any stroke and both the 200 and 400 individual medleys. They usually perform 5,000 to 7,000 yards per practice.
- Distance swimmers are those whose best events include the 500 yard and mile freestyle. They usually perform 7,000 to 9,000 yards per practice. While these volumes are measured per practice, it does not account for the training that takes place outside of the pool.

This article will review physiological and psychological factors that contribute to overtraining in response to high volumes and intensities of resistance training performed by elite swimmers.

Swimmers also perform resistance training sessions and core work exercises. These may be done in a regular training cycle with individual loads, or they may be done in circuit training, or most readily known as high-intensity interval training, which combines longer workouts with higher-intensity resistance exercises.

Lastly, swimmers undergo a period of taper prior to competition. This is a period of low volume and moderate intensity training

that is intended to allow the swimmer to recover from the season while maintaining their training adaptations in preparation for peak performance.

### CONCURRENT TRAINING

Though swimming is normally defined as an endurance sport, it also requires high levels of strength—especially core strength—to move through the water efficiently by means of kicking and pulling. Swimmers often engage in some sort of resistance training and dryland activities that include using weights and medicine balls along with their normal swim workouts.

*There are certain protein pathways activated with each type of exercise and may interact with one another. Protein Kinase B (Akt) and mammalian target of rapamycin (mTOR) are phosphorylated during resistance training to stimulate muscle protein synthesis. Adenosine monophosphate-activated protein kinase (AMPK) is the energy sensor in the cell that senses low levels of ATP and high levels of ADP and AMP regularly seen with endurance training. When there are high levels of ADP and AMP, it stimulates phosphorylation of PGC-1 $\alpha$ , which activates mitochondrial biogenesis*

*This results in an increase in mitochondria and allows the muscle to better utilize fats via aerobic production, which is favorable for energy synthesis.*

Evidence also shows performance benefits for concurrent training compared to resistance training or endurance training alone. A study by de Souza, et al. (2013) provided evidence that participants who performed concurrent training saw benefits from both resistance and endurance training.

In a study by Aspenes, et al. (2009), they investigated the effects of concurrent training in elite swimmers. They found that adding two sessions of maximal strength training per week to a high-volume training regimen commonly seen in elite swimmers improved tethered swimming force and 400-meter performance, but did not result in gains in  $VO_2$  peak.

However, it is important to note that there were gains in 50- and 100-meter performance with a small p-value, but there was a small sample size, and they were not statistically significant. They also found that there was no change in stroke rate or stroke length normally seen with improvements in sprinters after the intervention.

Thus, they found that concurrent training improved middle dis-

tance performance, but that a larger sample size would be needed to conclude if concurrent training improved 50- and 100-meter performance.

### SLEEP, STRESS, FATIGUE, MUSCLE SORENESS AND CHANGES IN APPETITE

Studies show that athletes in individual sports are more vulnerable to overtraining than those in team sports.

Swimmers who experience overtraining also experience many psychological disturbances, though it is important to note that causation cannot be determined from this correlation. It is unclear whether or not being overtrained results in lower levels of mood states or if lower mood states result in performance decrements and overtraining.

Psychological factors that have been found in overtrained swimmers include higher ratings of perceived exhaustion, increased sleep, stress, fatigue, muscle soreness and changes in appetite. These psychological factors could be the result of adding high-intensity resistance training to the aquatic training performed by swimmers daily and may have a physiological basis.

### CORTISOL, TESTOSTERONE AND INFLAMMATION INFLUENCES

There are many physiological factors that could be associated with overtraining, although these may be different for elite swimmers due to their style of training.

A major hormone that has been shown to contribute to overtraining is cortisol, which is a catabolic hormone that is released when the body experiences stress.

Another hormone to consider is testosterone. Testosterone is an anabolic hormone that stimulates muscle protein synthesis and muscle cell growth and is greater in response to resistance training. Testosterone levels are inherently greater in men, and acute responses are greater in men and either non-existent or only slightly elevated in women.

However, decreased levels of total testosterone were seen in high volumes of resistance and endurance training in swimmers. This could suggest an inhibitory effect of the release of testosterone following resistance training due to endurance training.

It could be the testosterone:cortisol ratio that leads a swimmer to be overtrained rather than the levels of each hormone alone. With this testosterone:cortisol ratio, muscle protein breakdown is favored and, when combined with heavy resistance training, could lead a swimmer to experience performance decrements and overtraining.

While muscle protein synthesis is heavily dependent on hormones, it can be hindered by inflammation. Inflammation is a response from high-intensity resistance training and prolonged duration of extreme training. Inflammation is a result of many factors, including cellular damage that occurs during high force production in muscle cells.

In a study by Margonis, et al. (2007), they concluded that prolonged inflammation has been seen in overtraining due to a delayed response of inflammatory markers and sustained oxidative stress response, where there was a correlation between oxidative stress biomarkers and decline of muscle strength with heavy resistance training.

As seen in **Fig. 1** (top), this means that a higher intensity and

volume of resistance training in time interval 3 lead to a delayed response of healing, and a significant amount of inflammation could still be seen during taper in time interval 4.

Another measure of inflammation is neutrophil count, which is white blood cells that flock to areas of inflammation. In a study by Hooper, et al. (1995), they found that neutrophil levels were shown to be higher in overtrained swimmers during taper, but not different from well-trained swimmers at any other point in the season.

These studies suggest that high-intensity resistance training could be a strong factor in overtraining in swimmers in regard to inflammation, and a prolonged effect could lead to performance decrements if the resistance training program is not discontinued with enough time to recover prior to competition.

### CREATINE KINASE, NUTRITION AND INFECTIONS

Other markers that have commonly been used to diagnose overtraining are creatine kinase, nutrition and infections. A common enzyme that aids in the production of energy is creatine kinase (CK). It is involved in the breakdown of phosphocreatine in short bouts of high-intensity exercises seen in resistance training.

Elevated levels of creatine kinase is a sign of muscular distress and inhibits muscle contraction due to their effect on decreasing the cell's pH. Creatine kinase has been shown to be a good indicator of cellular damage in swimmers, as creatine kinase levels increased with high volumes of training and returned to baseline

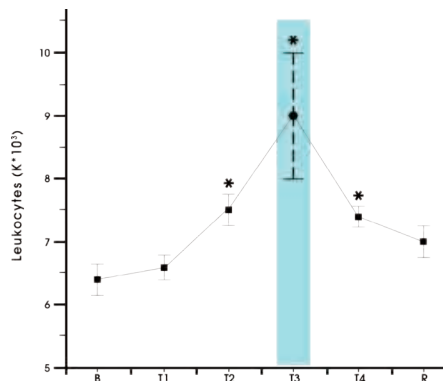


FIG. 1 > MARGONIS, ET AL. (2007). RESISTANCE TRAINING AND LEUKOCYTE COUNT



– continued on 22



after recovery. Prolonged elevation in creatine kinase could indicate overtraining in swimmers as a result of resistance training.

Overtraining has also shown to be an effect of malnutrition. As previously stated, swim workouts can range anywhere from one to three hours. Most swimmers consume water or a sports drink during this time in order to stay hydrated. However, for durations of exercise more than an hour, protein must be consumed during exercise in order to elicit a favorable fractional synthetic rate.

Fractional synthetic rate (FSR) is the rate of muscle protein synthesis over muscle protein breakdown. An FSR greater than 1 is favorable and means there is more protein synthesis than breakdown...and the opposite if it is lower than 1.

Studies indicate that ingesting carbohydrates only and waiting to consume protein until after training results in FSRs less than 1, suggesting more protein breakdown. Only subjects who consumed protein during workout experienced FSRs greater than 1, suggesting more protein synthesis.

Thus, overtraining could be the result of greater muscle protein breakdown. However, muscle protein synthesis is also correlated with the testosterone:cortisol ratio as mentioned previously. Since overtraining due to high-intensity resistance training favors muscle protein breakdown in regard to hormones, it is even more important to ingest protein during exercise to elicit favorable rates in muscle protein synthesis and avoid overtraining.

## IMMUNE FUNCTION

Lastly, upper respiratory tract infection (URTI) is an illness caused by infection of the upper respiratory tract, such as the mouth, nose, throat and lungs. High intensities and high volumes of training can inhibit immune function of protecting against these infections. Immunoglobulin A (IgA) is a common antibody that defends against these infections, and research indicates a significant decrease in IgA concentrations in overtrained compared to well-trained swimmers, suggesting an immune system deficiency in overtrained swimmers. High-intensity resistance training puts high levels of stress on the body and could result in decreased immune function.

## PERFORMANCE DECREMENTS

Ultimately, overtraining is most readily defined as a lack of performance despite consistent training. Though we have seen that combining resistance and endurance training improves middle distance swimming performance, adding resistance training in excess is the cause of overtraining. This is because exhaustion seen as a result of endurance training is obvious, while serum cortisol, testosterone levels, inflammation and other markers mentioned in this article are not frequently measured or taken into account when developing training plans.

Resistance training puts greater stress on individual muscle fibers, and adding high-intensity resistance training along with training performed in the pool can amplify the factors of overtraining, resulting in performance decrements in swimmers.

For endurance athletes, a commonly used predictor of performance is maximal aerobic speed (MAS) and velocity at aerobic threshold (VAT). Greater maximal aerobic speed and velocity at aerobic threshold are favorable. Overtrained athletes normally see a decrease in speed at high percentages of MAS. Research indicates that overtrained swimmers who experienced increases in cortisol, decreases in testosterone and elevated creatine kinase levels from resistance training saw decreases in speed at high percentages of their maximal aerobic speed, suggesting they were overtrained as a result of high-intensity resistance training.

However, these results were gender-specific. Research also indicates that female swimmers display a greater ability to adapt to training volumes and intensities in regard to performance, suggesting women possess a greater ability to recover from training than men.

This could be the result of lower loads of resistance training performed by women due to different muscle fiber types and smaller muscle mass. Thus, resistance training could be a large factor of overtraining in swimmers, and training plans should be gender-specific in order to maximize performance.

## CONCLUSION

Many physiological factors have been found in swimmers experiencing overtraining, including decreased ability to fight infections, higher levels of stress and cortisol, lower levels of testosterone, prolonged inflammation of muscle tissue and insufficient intake of protein during training to elicit proper recovery.

Though some of these factors cannot be easily observed and are not frequently measured, it is important for coaches and parents to pay attention to their swimmers in order to help them achieve high levels of performance.

Frequency, intensity and volume of both resistance and endurance training should be carefully managed, and input from the swimmer in developing training plans is required in order to maximize performance and avoid being overtrained. ♦

*Grant Smith is scheduled to graduate in May from ASU with a bachelor's in kinesiology. He will pursue his doctorate in physical therapy at the University of Miami.*

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# STILL THE ALL-AMERICAN ATHLETE

BY SHOSHANNA RUTEMILLER

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AFTER THE LONDON OLYMPICS, NATHAN ADRIAN WAS DUBBED BY THE MEDIA AS THE "ALL-AMERICAN ATHLETE." DESPITE A DISAPPOINTING PERFORMANCE AT LAST YEAR'S WORLD CHAMPIONSHIPS, THE SUPERSTAR SPRINTER STILL HAS GREAT EXPECTATIONS FOR 2014 AND BEYOND.

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[PHOTO BY PETER H. BICK]



## 2013 WAS A YEAR OF GREAT EXPECTATIONS FOR NATHAN ADRIAN.

Following his golden performance in the 100 meter freestyle at the 2012 London Olympics, the media dubbed him the “All-American Athlete.” Adrian made his way around the talk show circuits and appeared on a collection of newsstand magazine covers. Everyone was wondering, “What’s next?” for the then 6-7, 23-year-old.

Last year’s expectations culminated at the Barcelona World Championships. Many wondered if he could win four gold medals by taking the 50 and 100 freestyles as well as swimming a leg on both of the U.S. men’s 400 relays.

Unfortunately, Adrian failed on all attempts to bring home gold. The magic that attended his every stroke in London never made the trip to Barcelona. He missed making the podium in the 50, placing fourth behind Brazil’s Cesar Cielo, Russia’s Vlad Morozov and Trinidad and Tobago’s George Bovell; and could only produce a bronze medal in the 100, finishing third to Australia’s James Magnussen and teammate Jimmy Feigen.

He picked up a silver medal in the 400 free relay, but was denied golden redemption in the 400 medley relay when a false start by teammate Kevin Cordes on the breaststroke leg disqualified the U.S. squad.

## MOVING FORWARD

But as a new year unfolds, Adrian’s disappointing performance at Worlds is fading fast.

“2014 is exciting,” said Adrian. “It’s moving toward the Olympic Trials and the (2016) Olympics. I get to see what we can do and where we can take this.”

Adrian came back with a vengeance this past December at the U.S. winter nationals. He won the men’s 50 and 100 yard freestyles (18.89, 41.39), posting times near his American records. His 50 was just a few tenths off his mark of 18.66 set in 2011, and his 100 just missed the 41.08 that he posted in 2009.

“Going those times felt great,” he told *Swimming World* at the meet. “But I would like to go back and look at how I can execute my starts, turns and break-outs a little bit better.”

By his own admission, the short course American record holder and NCAA Divi-

sion I champion (Adrian won NCAA titles for Cal in the 50 free in 2009 and 2011 and the 100 in 2009-10-11) has decided to shift his focus from short course to long course. Even in practice, where he continues his swimming career under Cal’s head men’s coach Dave Durden, his short course sprint freestyle paces are expected to be at a tempo of 1.1 seconds per stroke cycle.

“(Durden and I) have been working on trying to change stroke techniques a little bit and trying to differentiate between a 100-yard and a 100-meter stroke and between the 50-yard and 50-meter stroke,” said Adrian. “They are four different events with four different strokes that you have to fine-tune just a little bit differently.

“Still, it’s all freestyle, but there are little differences.” He believes that the 50-yard and 50-meter events are mostly about power—as is the 100-yard race—and the 100 meter freestyle focuses more on efficiency.

Adrian works closely with Coach Durden, constantly striving to make small adjustments to his craft.

“At this point, it’s been a lot of bouncing ideas off of each other and having that kind of a relationship,” said Adrian. “(Durden) is obviously an amazing coach and very technical, which speaks very well to me because I am also very technically focused.”

## SECRET WEAPON

Adrian also has a super secret weapon: Russell Mark, USA Swimming’s sports performance consultant.

“I think one of the greatest resources we’ve had at our disposal is Mark at USA Swimming,” said Adrian. “If there is ever anyone going a fast race, I can always go, ‘Hey Russell, can I check out that video?’ and he’ll be like, ‘Yeah, sure—I’ll send it to you.’”

With Mark, Adrian can analyze his competitors’ strokes and take into consideration their strengths and weaknesses. Adrian finds the combination of video analysis and the subsequent in-practice implementation with Durden extremely effective.

“I can tell (Durden) that I had a conversation with (Mark), and these are his suggestions,” said Adrian. “The next day

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WE’VE GOT HIM COVERED!

NATHAN ADRIAN HAS BEEN ON THE COVER OF *SWIMMING WORLD* MAGAZINE TWICE DURING HIS CAREER, BEGINNING WITH THE JULY 2009 ISSUE. THE MAGAZINE DESCRIBED ADRIAN AT THE TIME AS “A RISING STAR ON THE AMERICAN SPRINT SCENE WHO APPEARS READY TO TAKE THE NEXT STEP THAT COULD CATAPULT HIM AMONG THE WORLD’S BEST SPINTERS.” ♦

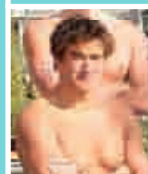
JULY 2009



NOVEMBER 2010



Did You Spot Nathan?



EVER WONDER WHAT NATHAN ADRIAN DOES WHEN HE'S NOT SWIMMING LAPS? READ ON FOR THREE OF ADRIAN'S FAVORITE "DRY" ACTIVITIES...PLUS ONE ACTIVITY HE WOULD RATHER NOT DO AT ALL:

**BALANCING EXERCISES:**

"I THINK THEY ARE REALLY IMPORTANT AND UNDERVALUED IN SWIMMING. A LOT OF DIFFERENT CROSS-BODY AND STABILIZING EXERCISES ARE GREAT."

**SOCCER-TENNIS:**

(AKA TENNIS WITH A SOCCER BALL)

"IT'S EXACTLY WHAT YOU THINK IT IS: SOCCER-SLASH-TENNIS. YOU ARE ALLOWED TWO BOUNCES OVER THE NET. OR WE'LL JUST GO PLAY REAL SOCCER SOMETIMES."

**PADDLE BOARDING:**

"IT'S REALLY FUN!"

**THE ACTIVITY NATHAN WOULD RATHER NOT DO?**

**NO TO YOGA:**

"I HAVE DONE (YOGA), AND I ENJOYED IT...BUT IT JUST GETS SO HOT AND SWEATY AND GROSS. INSTEAD, I STRETCH A LOT—WELL, I STRETCH A MEDIUM AMOUNT." ♦

**NATHAN ADRIAN – continued from 25**

in practice when we're playing with fins and paddles, I'll try to change (what's needed)."

However, Adrian admits that the changes are gradual.

"It's not like one day I look at someone's stroke, and the next day in practice, I change mine and go a best in-practice time," explains Adrian. "No, I have to work to incorporate the changes. Any changes you make have to be a little bit slow-moving in order to keep your stroke together at all, and then you can measure those changes once a meet comes up."

Adrian had the chance to measure how effective his changes were at the Arena Austin Grand Prix, Jan 17-19. He now has a stretch of time in which to tweak his stroke before the Phillips 66 National Championships, Aug. 6-10, in Irvine, Calif. At that meet, Adrian will get the chance to cement his spot on the 2015 U.S. national team, which will compete at the 16th FINA World Championships that summer in Kazan, Russia.

"This summer has a lot of pressure on it," said Adrian. "It's a dual selection meet for the next two years. As with any summer meet, you want to go fast, but I guess there is a little more pressure with this one."

Fortunately, Adrian can rely on his national team teammates to help relieve the pressure. Adrian makes an effort to develop relationships with all of his teammates.

"All of us (on the team) hang out," said Adrian. "It's a great mix of people, and one of the things you can do is to try to eat a meal with a different person or a different group every day."

**"NATIONAL TEAM BESTIES"**

But there is one person in particular that Adrian considers his go-to guy: Matt Grevers, the 2012 Olympic gold medalist in the 100 back. The two have roomed together on and off during international competitions and training camps since the 2009 World Championships in Rome, and they have developed a close friendship.

"We're 'National Team Besties,'" said Adrian. "Matt and I are really good friends. It works really well rooming together with him. It's easy to tell if you have that (dynamic) with someone and

**"(FREESTYLE IS) ALL ON A SPECTRUM. THERE IS A TON OF EFFICIENCY IF YOU NEED TO SWIM A MILE LIKE (WORLD RECORD HOLDER AND OLYMPIC CHAMPION) SUN YANG OR ONE OF THOSE REALLY BIG GUYS THAT HAS A REALLY LONG STROKE. MATT McLEAN (A MEMBER OF THE MEN'S GOLD MEDAL-WINNING 800 FREESTYLE RELAY AT THE 2012 OLYMPICS AND 2013 WORLD CHAMPIONSHIPS) IS A GREAT EXAMPLE OF SOMEONE WHO IS SUPER, SUPER POWERFUL."**

—NATHAN ADRIAN

if you prefer to room with him or alone. I definitely prefer to room with him."

Overall, Adrian adds up on his fingers that the two have shared a room for several months' time. In addition to the 2009 World Championships, Adrian and Grevers were together during all international competition in 2012 and 2013, including the London Olympics when both came home with individual gold medals.

In these high-stress, high-pressure atmospheres, Adrian recognizes that their relationship works because of Grever's easygoing nature.

"He's a really good guy and has a great sense of humor," said Adrian. "He's a good sport about anything. My role growing up was as the annoying little brother, so I have a knack for getting under people's skin. It took me a long time to finally figure out how to get a rise out of Matt."

Most people wouldn't expect that the now-25-year-old's role on the team is the goofball, especially because with each international competition Adrian qualifies for, he is moving closer toward the "veteran" category on the U.S. national team.

To put his 25-year-old age in perspective, Adrian trains daily at Cal's post-grad program with two of the oldest national team members: Natalie Coughlin, 31, and Anthony Ervin, 32. Based on the numbers, Adrian can look with reasonable certainty toward a future that includes the Rio 2016 Olympics.

## LIFE OF AN ATHLETE EVER-CHANGING

But Adrian still recognizes that the life of an athlete can change in an instant.

“I think if you asked anyone on the national team what they are going to do in five years, then asked them again five years later what they were actually doing, maybe only five percent would have predicted correctly,” said Adrian. “It changes constantly. It could change if someone breaks their leg tomorrow or if someone has an amazing breakthrough season and decides that they are still so much in love with the sport that they are going to swim another 12 years or something. I’m going to have to re-evaluate (my swimming career) after 2016.”

Adrian recognizes that he has been extremely fortunate to live and train in one of the most dynamic cities in the world: Berkeley, Calif., located northeast across the Bay from San Francisco.

“I was really fortunate to go to Cal. Had I taken a more traditional route of swimming collegiately and then retired when I was done, I would probably have gone to San Francisco, gotten a job and lived in the city,” said Adrian. “It’s a pretty cool life, and there are a lot of things to do.”

And what about Adrian’s answer to fangirls’ burning question of whether or not there will be a Mrs. Adrian anytime soon?

Adrian actually sees it in the near future.

“I’m finding more and more that I’m getting ready to settle down (in a relationship),” said Adrian. “I see my friends develop their careers and go through those little steps in life. I’m living in a spot where I could live ‘the college life’ for the next six years. But I also think that this is a point in time where I’m leaning toward growing up a little bit.”

As long as that growing up includes continuing to swim fast, no one will be disappointed to see a new Adrian fan cheering from the stands. Adrian eventually hopes to have a relationship similar to the one that “National Team Bestie” Matt Grevers has with his new bride, Annie Chandler.

Either way, in and out of the pool, the future looks bright for the “All-American Athlete,” Nathan Adrian. ♦



[PHOTO BY MATTHEW B. KELLY]

## IT'S A TEAM EFFORT!

**NATHAN ADRIAN DISCUSSES ALL OF THE COMPONENTS IT TAKES FOR AN ELITE NATIONAL TEAM ATHLETE TO ACHIEVE SUCCESS:**

“Without giving away our secrets, Russell Mark (sports performance consultant of the U.S. national team) is one of those under-utilized resources (at USA Swimming).

“Coaches tend to think, ‘Man, I’ve got this—I can handle all the technique work.’ We (at Cal) are fortunate because (Coach) Dave (Durden) knows what works really, really well, but maybe a combination of what Dave knows, Russell knows and what the individual athlete knows could ultimately be the best.”

● ● ●  
**SOME OF THE OTHER RESOURCES THAT ADRIAN HAS USED WHILE AT THE OLYMPIC TRAINING CENTER IN COLORADO SPRINGS, COLO., INCLUDE THE FOLLOWING:**

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**MEETINGS WITH DIFFERENT COACHES**

“I GO TO THE TRAINING CENTER WHEN CAL GOES TO THE TRAINING CENTER. I COULD GO THERE ANYTIME I WANTED, BUT I WOULD HAVE TO ARRANGE FOR ANOTHER COACH TO TRAIN ME WHILE I WAS THERE.” ♦



[PHOTO BY PETER H. BICK]



[PHOTO BY PETER H. BICK]

# NATHAN ADRIAN'S "FAVORITE SETS"

BY JEFF COMMINGS

SETS"

**N**athan Adrian and Dave Durden have one of the most productive coach/athlete relationships in the world. Since 2006, the two have slowly, but surely, risen in their respective ranks, with the pinnacle of their careers coming at the London Olympics. Adrian's gold medal in the 100 freestyle at the 2012 Games marked his official arrival on the international scene.

Durden shared a set from last November with *Swimming World* that gets Adrian in the mindset of racing, a common theme at Cal-Berkeley's Tuesday afternoon workouts.

**"NONE OF THESE SETS ARE PARTICULARLY ATTRACTIVE," DURDEN SAID. "HOWEVER, THE KEY FOR NATHAN IN THESE SETS IS TO RACE. WE SET UP RACES FOR HIM TO ENSURE THAT HE IS CHASING SOMEONE DOWN—(LIKE) RACING A 200 SPECIALIST—OR JUST HAVING HIM HAVE SOME EYE-POPPING SWIMS DURING THESE AFTERNOONS.**

**"I RECALL, AND PROBABLY NOT ACCURATELY, THAT HE WAS SUB-1:40 ON THE 200 WHILE ALSO BEING SUB-45 ON THE BACK TWO 100s—ALL FROM A PUSH, WHICH I THOUGHT WAS PRETTY GOOD."** ♦



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[PHOTO BY JOAN MARC-BOSCH]



PICTURED > (FROM LEFT) (TOP)  
MIREIA BELMONTE; CAMMILE  
ADAMS; (MIDDLE) TOM SHIELDS;  
MICHAEL McBROOM; (BELOW)  
KEVIN CORDES



# My “You-Had-to-Be-There” Moment!

BY PAMELA ROBERTS

PHOTOS BY PETER H. BICK

## SWIMMING WORLD CONTRIBUTOR PAMELA ROBERTS FROM GERMANY CLAIMS THAT THE 2013 DUEL IN THE POOL BETWEEN THE UNITED STATES AND THE EUROPEAN ALL-STARS WAS A CLASSIC! AND SHE SHOULD KNOW: SHE WAS THERE!

### MY MOMENT!

I now have another of those stories to add to my collection...because I was at the Mutual of Omaha Duel in the Pool, Dec. 20-21, in Glasgow, Scotland.

At first glance, the two-day short course meet looked like a sure thing for the Americans. After all, the U.S. has won every Duel since it began 10 years ago, beating the Australians in 2003, 2005 and 2007, then the European All-Stars in 2009 and 2011.

Of course, when it comes to swimming, U.S. dominance is nothing new. With Ryan

Lochte, Missy Franklin and Katie Ledecky, they have three of the world's best swimmers. However, Franklin, along with sprinter Nathan Adrian and backstroker Matt Grevers, opted out of the 2013 Duel in the Pool, while Ryan Lochte was forced to pull out due to an injury.

Even though the European All-Stars were without Hungary's superstar Katinka Hosszu, Dutch sprinter Ranomi Kromowidjojo and Russians Vlad Morozov and Yuliya Efimova, they still had powerhouses such as Mireia Belmonte of Spain, Danish long distance superstar Lotte Friis and French super-freestyler Yannick Agnel on their team.

Whispers of “This could be the year of the Europeans” became substantially louder.

It was going to be a tough one for the Americans. That became clear as soon as fans began filling the stands of the Tollcross International Swimming Center of Glasgow. Led by team captains Caitlin Leverenz, Jessica Hardy, Anthony Ervin and Cullen Jones, the Americans would not only have to compete against a very strong European team—they would also have to deal with a partisan crowd that raised the noise level to ear-splitting even before swimmers in the the first race were introduced. When the public address announcer introduced local hero and Olympic silver medalist, Michael Jamieson, the noise level was deafening.

I think it is safe to say that Day 1 of the Duel did not go as planned for both of the teams: the Europeans were scoring points with ease. The biggest surprise was the women's 400 meter freestyle. Before the race, nearly everyone conceded victory to Ledecky, *Swimming World's* Female World Swimmer of the Year.

Every sport has it: an ultimate “You-had-to-be-there” moment.

Hockey had the “Miracle on Ice” from the 1980 Olympics in which Team USA beat the Russians.

British author Nick Hornby wrote the book, “Fever Pitch,” about the 1988-89 season of the British Premier League when the soccer team of Arsenal London won the championship in the final game. Same as the “Miracle on Ice,” “Fever Pitch” was made into a film with Colin Firth. Years later, Jimmy Fallon and Drew Barrymore starred in the American version that was centered around a fan of the Boston Red Sox in the 2004 season when the Sox won the World Series.

I have seen moments like these on TV:

- In 1999, when soccer's Manchester United won the prestigious Champions League trophy with two goals in the final two minutes of the game;
- In 2005, when my favorite soccer team, Liverpool FC—after trailing 3-0—won the same trophy with a victory over highly-favored AC Milan;
- In 2013, when tennis star Andy Murray won the men's title at Wimbledon.

Athletes dream of these transformative moments. It is similar for the fans.

The lucky ones have a lifetime of “Do-you-remember-when?” moments, with stories to tell friends and family any chance they get. It's the dream of every sports fan to see his or her favorite team or athlete rise to victory. It's even better when it's unexpected or happens after a nail-biting competition.

— continued on 32

## MY "YOU-HAD-TO-BE-THERE" MOMENT — *continued from 31*

Less than four minutes later, the huge roar of the crowd told the story. The Europeans had racked up a stunning 1-2-3-4 sweep, with Ledecky losing the 400 at an international meet for the first time.

After the first day of the two-day meet, Team Europe led, 68 to 54.

### AN UPHILL BATTLE

Trailing by 14 points, it was clear that Team USA would have to do some serious work to remain in contention. However, fired up by the boisterous crowd at Tollcross, Europe started the day with another sweep—this time, a 1-2-3 finish in the women's 800, dominated by Mireia Belmonte of Spain.

That loss must have been what finally awakened the "sleeping giant."

The poolside chants of "U-S-A, U-S-A" grew louder and louder as Michael McBroom cruised ahead of the pack in the men's 800. He went on to win the race with an American record (7:33.99), but it was Michael Klueh who added a big exclamation point to the race when he outtouched France's Yannick Agnel in the final meters, hitting the wall third instead of fourth.

The Americans still trailed as the second day's events progressed, but they slowly began chipping away at the deficit. The turning point came when the USA's Olivia Smoliga defeated Europe's Simona Baumrtova in the 100 back, making it clear that writing off the Americans would be a huge mistake.

By this point, the cheers and energy coming from the Scottish crowd could truly be described as insane. The Scots seemed to get louder with every race, and even though their loyalties were still with the European team, the fighting spirit of the Americans did not go unappreciated. Spurred on by a group of Shane Ryan fans, the cheers for Team USA grew louder.

One of the highlights of Day 2 was the men's 100 breast, a race featuring fan favorite, homeboy Michael Jamieson, and Germany's Marco Koch, the silver medalist at the World Championships this past summer. However, neither of them won the race. America's Kevin Cordes not only won, but he also set an American record of 56.88.

Cordes' victory also knotted the team score at 97—the first time that the score had been tied since the meet began. And with only six individual races and two relays remaining, it was clear the meet would go down to the wire.

The 200 fly races saw the Europeans edge ahead, as Belmonte nipped the USA's Cammille Adams in the women's event, and Tom Shields took the men's contest in an American record time (1:50.61).

### THE HEAT IS ON

From then on, it was back-and-forth—definitely, a "duel"!

Team Europe dominated the women's 50 free with a 1-2 finish ahead of Simone Manuel that gave them a nine-point advantage. But the U.S. men came roaring back with their first—and only—1-2-3 sweep, as Jimmy Feigen touched first ahead of Cullen Jones and Anthony Ervin, who tied for second. Once again, the score was tied—this time at 115.

With only four races to go, anything was possible.

The Americans again fell behind after the 200 IM, as the

European women finished 1-3. But Americans Conor Dwyer and Chase Kalisz placed 1-3 in the men's race to knot the score at 124.

Now, it came down to the relays.

Once again, Team Europe forged ahead when Michelle Coleman, Jeanette Ottesen Gray, Fran Halsall and Femke Heemskerk took the women's 400 free relay. By the time the men's teams for the 400 freestyle relay stepped out onto the pool deck, it was pure bedlam. Both teams were on their feet, with Jessica Hardy and Conor Dwyer front-and-center for Team USA and Denmark's Lotte Friis serving as head cheerleader for Team Europe.

On paper, it looked like the American team of Jimmy Feigen, Anthony Ervin, Tom Shields and Cullen Jones were going to be the clear winner, but the European team of Yannick Agnel, Adam Brown, Ben Proud and Robbie Renwick gave them a run for their money—until Jones pulled away on the anchor leg from Scotland's Renwick and touched the wall first.

PICTURED > EUGENE GODSOE



## PERSONAL FAVORITE

What followed was my personal favorite moment of the meet.

After the last scheduled event of the Duel, both teams were tied at 131. There would be a tiebreaker to determine the meet's champion: a 4 x 50 meter mixed medley relay.

Team USA was going nuts; Team Europe was going nuts. EVERYONE in the venue was giving a standing ovation to ALL of the outstanding athletes. And that was before Renwick and Jones had even gotten out of the pool after the previous race. And over all the noise and cheers, Katy Perry's song, "Roar," blasted over the loudspeakers. For those not familiar with the lyrics, a line in the song goes, "I am a champion, and you're gonna hear me roar."

Minutes later, the teams were announced as they stepped onto the pool deck for the final race:

*"For Team USA: Eugene Godsoe...Kevin Cordes...Claire Donahue...and Simone Manuel.*

*"For Team Europe: Chris Walker-Hebborn...Damir Dugonjic...Jeanette Ottesen-Gray....and Fran Halsall."*

Earlier in the meet, Godsoe had beaten Walker-Hebborn in the backstroke, and Cordes had beaten Dugonjic in breaststroke. However, Ottesen-Gray had finished ahead of Donahue in the butterfly, and Manuel had lost to Halsall in freestyle.

Could the two teams finish in a dead heat?

The crowd went absolutely silent as the swimmers stepped onto the blocks. But as soon as the starting beep sounded, it was pure pandemonium!

From my vantage point, I couldn't see Team Europe very well, but I was able to see Team USA—every last one of them—standing poolside, all doing their part to push their teammates along, screaming themselves hoarse, jumping up and down, turning their towels in circles above their heads.

Meanwhile, in the pool, Godsoe and Cordes had built a lead, and Donahue was holding off a charging Ottesen-Gray.

As Manuel jumped off the blocks, Team USA still had a slight lead. The 17-year-old surged ahead and managed to put a little bit of space between herself and Great Britain's Halsall. In the final 50 meters, Halsall closed the gap, but it was too late.

Manuel touched first. Team USA had won the race—with a world record 1:31.17—and the Duel.

The "U-S-A" chants began reverberating throughout the natatorium as a teary-eyed Manuel emerged from the pool. Once she did, she was inundated with a seemingly endless string of hugs from her teammates.

Most of the fans remained standing in the stands, saluting the efforts of both Team USA and Team Europe, and celebrating a win that could have gone either way. Team USA received the winner's trophy, keeping its unbeaten streak alive. Conor Dwyer and Mireia Belmonte were awarded trophies for male and female swimmers of the Duel. All the while, Manuel—with a huge smile on her face—was still cashing in on all of the hugs from her teammates.

## EXHAUSTING AND EXHILARATING

Up in the stands, I felt as if I had just swum a race myself. Earlier in the day, Godsoe was asked to describe the Duel in the Pool in one word. He chose two, and said, "Exhausting" and "Exhilarating."

After having watched those final eight races, I felt like I knew what he had been talking about!

Watching this meet and being on the edge of my seat until the very end was so much fun. I loved being surprised by the outcome of numerous races, seeing swimmers who I admire and respect perform so well in the sport they love so much. It was amazing to experience the atmosphere at Tollcross and be swept up in the Scottish frenzy.

I now have my own "Miracle On Ice," my personal version of "Fever Pitch," my "You-had-to-be-there" moment. I can now say, "Hey, have you heard of that Duel in the Pool—the one where Team USA won in a tiebreaker relay? Well, I was there. I saw it." ♦

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*Pamela Roberts is a Swimming World contributor based in Germany.*



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— continued on 36

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Elite Camps (Up to 7 Weeks): June 8–July 26

**CAMP CHIKOPI FOR BOYS  
THE WORLD'S FIRST SWIM CAMP (1920)****Bob & Colette Duenkel, Camp Directors****373 Chikopi Road • Magnetawan, ON Canada P0A 1P0****705-387-3811 • Off Season: 954-566-8235****Fax–705-387-4747 • Off Season: 954-566-3951****Email: [campchikopi@aol.com](mailto:campchikopi@aol.com)****[www.campchikopi.com](http://www.campchikopi.com)**

Under the direction of Bob Duenkel, Director of the International Swimming Hall of Fame and former US Open Water Swim Coach, the ideals and traditions of Matt Mann, US Olympic Swim Coach, continue at Camp Chikopi, after all, we have the distinction of being the "World's First Swim Camp" to uphold. Founded in 1920, Chikopi continues to offer boys daily specialized swimming and an excellent mixture of traditional sports in a healthy outdoor environment. 2012 US Olympic Gold and Silver Medalist, Nick Thoman, and Canadian, Andrew Ford are our most recent triumphs. All quality swim instruction takes place in Ahmic Lake. We have a pool built into the lake and offer daily training opportunities in open water swimming. Our highly trained staff of counselors and instructors provides the crucial

3:1 ratio that ensures individual attention for every boy. The majority of our staff has developed through our camper ranks to counselor and staff, and were chosen for their skills and personality to guide and encourage. Chikopi is a small camp and we can accommodate 75 campers, aged 7-17. In 2013 we represented over 18 nations including USA and Canada. There is a choice of 8 sessions to select from, 2,3,4 or 7 weeks long. Transport is available from Toronto. Sessions 6,7 and 8 enjoy the adventure of a canoe trip in our trademark green and white cedar strip canoes, on a cruise through Algonquin Provincial Park and other lakes and rivers. Being a swimmer does not restrict you from participating in our other camp activities including Soccer, Tennis, Volleyball, Softball, Cricket, Archery, Lacrosse, Wrestling, Mountain Biking, Kayaking and Sailing. We have weekly get togethers with our sister camp. Chikopi is Accredited by the Ontario Camping Association. Early Bird Registration discount available.

7 Week: June 25–Aug. 13

4 Week: June 25–July 23; July 16–Aug. 13

3 Week: June 25–July 16; July 23–Aug. 13

2 Week: June 25–July 9; July 16–July 30; Aug. 16-30

**CAROLINA SWIM CAMP****Rich DeSelm, Head Coach****University of North Carolina • Chapel Hill, NC****919-619-3899 • 919-962-1603 (Fax)****Email: [cgarth@unca.unc.edu](mailto:cgarth@unca.unc.edu)****[www.carolinaswimcamp.com](http://www.carolinaswimcamp.com)**

Come get faster at USA Swimming National Team Coach, Rich DeSelm's CAROLINA SWIM CAMP! We offer three weeks of camp with outstanding coaching. Technique Camps are geared for the club swimmer, ages 8 – 18, to improve technique with every stroke and develop practice and performance skills. These camps offer: Specific technique / stroke instruction; Filming and evaluation; Daily stroke talks from Head Coach, Rich DeSelm and UNC Staff; Daily interaction with current USA Swimming National Team Member & UNC team members. Elite Training Camp is a training style camp where athletes train specifically in a distance, mid-distance or sprint group. Elite Camp is open to advanced club swimmers ages 12 – 18. This camp offers: Training in all energy systems; Recovery/strength building dryland; Race strategy; Specific instruction from Head Coach Rich DeSelm, UNC staff and current USA Swimming National Team members; Stroke filming. Sign up now at [www.carolinaswimcamp.com](http://www.carolinaswimcamp.com) or contact Christy Garth, Men and Women's Assistant Swim Coach with questions at telephone and email above.

Technique Camps: June 8-12; 22-26

Elite Training Camp: June 15-19

**FUSION SWIM CAMPS****1700 Post Road, D-5 • Fairfield, CT 06824****800-944-7112 • Email: [support@FusionSwimCamps.com](mailto:support@FusionSwimCamps.com)****[FusionSwimCamps.com](http://FusionSwimCamps.com)**

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 and 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! Boys and Girls Ages 10-18.

June 22-26: Gregg Parini Swim Academy @

Denison University (OH)

June 22-25: 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****607-431-4018 (Fax)****Email: [rothenberged@hartwick.edu](mailto:rothenberged@hartwick.edu)****[www.hartwickhawks.com](http://www.hartwickhawks.com)**

Celebrating Its 35th Year—An extensive program for ages 8-18 (coeducational...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 dryland training. Above and underwater filming and analysis. Lectures on nutrition, mental preparation, strength training, etc. Sprint/distance camp emphasizes condition 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. Email or call for a brochure/application. Please contact Dale Rothenberger for fee informa-

tion for both residential and commuter campers... multiple-week discounts available.

Stroke Technique: July 6-12; 20-26  
Stroke Technique/Sprint Distance: July 13-19  
Springboard Diving Camp: July 27–Aug. 1

## LONGHORNS SWIM CAMP

**Jon Alter, Director**

**The University of Texas**

**P.O. Box 7399 • Austin, TX 78713-7399**

**512-475-8652 • 512-232-1273 (Fax)**

**Email: [longhornswimcamp@athletics.utexas.edu](mailto:longhornswimcamp@athletics.utexas.edu)**

**[www.Longhornswimcamp.com](http://www.Longhornswimcamp.com)**

37 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 one of the most exciting camps in the country! Guest coaches and speakers include Olympians Brendan Hansen, Ian Crocker, Josh Davis, Kathleen Hersey, Colleen Lanne-Cox, Garrett Weber-Gale and Whitney Hedgepeth. Open to male and female competitive swimmers, ages 8 – 18. Camp is held at Jamail Texas Swimming Center on the UT at Austin campus, home to 19 NCAA team champions. Facility includes a 50-meter by 25-yard pool, and 25-yard by 25-meter pool. 4 training groups based on age and ability, with a 1:7 coach/swimmer ratio in stroke 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. 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 \$935; Day Camp \$835. Sessions fill quickly! Complete camp information and online registration available on website. Per NCAA rules, sport camps and clinics conducted by The University of Texas are open to any and all entrants (limited only by number, age, grade level, and/or gender). 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.

Session 1: June 1-6  
Session 2: June 8-13  
Session 3: June 15-20  
Session 4: June 22-27  
Session 5: June 29–July 4

## MICHIGAN SWIM CAMP

**Jim Richardson, Director**

**8160 Valley View Dr. • Ypsilanti, MI 48197**

**734-845-8596 • (Fax) 734-484-1222 / 734-763-6543**

**Email: [umswim1@gmail.com](mailto:umswim1@gmail.com)**

**[www.michiganswimcamp.com](http://www.michiganswimcamp.com)**

**[www.mgoblue.com](http://www.mgoblue.com)**

Four sessions open to any and all entrants, limited to 195 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, Roger Karnes and Brad Shively are directly involved in coaching and teaching campers. Campers HD filmed daily and receive a written stroke analysis. Optional custom 4 view (2 underwater) DVD 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 includes instruction, swim cap, T-shirt, color photo, instructional printed materials, "goody bag" and room and board (resident campers only). (*See display ad on page 40*)

June 8-12; June 22-26; June 29–July 3; August 3-7

## NAVY SWIMMING CAMPS

**Bill Roberts, Camp Director**

**566 Brownson Road**

**Annapolis, MD 21402**

**410-293-5834 / 410-293-3012**

**(Fax) 410-293-3811**

**Email: [navyswimmingcamp@usna.edu](mailto:navyswimmingcamp@usna.edu)**

**[www.navyswimmingcamp.com](http://www.navyswimmingcamp.com)**

**[www.navysports.com](http://www.navysports.com)**

Expect direct results being part of the 2014 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. You will receive individual attention. Additional pool 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 Severn River boat cruise are all part of the schedule for 2014. Campers learn, train and reside in an amazing 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 website for greater detail including brochure, application, daily schedule and frequently asked questions. Cost: \$580 / commuter (ages 8-18); \$630 / extended day (ages 8 – 18); \$680 / resident (ages 9 – 18). All campers receive a NAVY swimming shirt. Go Navy! (*See display ad on page 40*)

June 10-14: Session I  
June 16-20: Session II  
June 14, 15 & 16: (See website for clinic offerings)

## NORTH BALTIMORE SWIM CAMP

**John Cadigan, Coach**

**5700 Cottonworth Ave.**

**Baltimore, MD 21209**

**410-433-8300 • 410-433-0953 (Fax)**

**Email: [jcadigan@nbac.net](mailto:jcadigan@nbac.net)**

**[www.nbac.net](http://www.nbac.net)**

North Baltimore Aquatic Club Summer Swim Camps rely on small numbers, quality coaching, interacting with Olympic and International level swimmers, along with mental and physical training to teach the "NBAC Way". Includes day and overnight options. We are offering a Spring Break Camp for ages 9–14 from April 14-18 with maximum enrollment of 32. This Summer, we will conduct 3 weeks of *Goals, Growth & Greatness* Camp for ages 9 – 13 with day and overnight campers with a maximum enrollment of 48. This camp includes talks on Goal Setting, Injury Prevention and Management, and Healthy Choices for Swimmers (Nutrition). Each day includes underwater analysis of strokes and instruction in all four competitive strokes, starts and turns. Two water sessions are included per day plus dryland, with an emphasis in this camp on teaching about training. We also offer one week of *Reach, Risk and Race*, this Camp seeks athletes for a fast paced, high level training experience with NBAC's coaching staff and nearby collegiate coaches. In addition to on-deck instruction, these coaches will speak directly to campers about collegiate swimming. Swim twice a day for four days and do dryland. Maximum enrollment is 32. There is underwater analysis and instruction, but the emphasis is on training. Costs: Spring Break and Goals, Growth & Greatness: Day Camp \$775, Overnight \$950; Reach, Risk and Race: Day Camp \$650, Overnight \$800. Sign-up ONLINE today! (*See display ad on page 41*)

Spring Break Camp (Ages 9-14): April 14-18  
Goals, Growth & Greatness (Ages 9-13): June 17–21 (Week 1); June 24–28 (Week 2); July 6–10 (Week 3)  
Reach, Risk & Race (Ages 14-18): June 30–July 3

— continued on 38

**NORTHWESTERN UNIVERSITY  
WILDCAT SWIM CAMP**

2311 Campus Dr. • Evanston, IL 60208  
847-491-4829 • 847-467-2396  
Email: [amiller@northwestern.edu](mailto:amiller@northwestern.edu)  
[www.nuswimcamps.com](http://www.nuswimcamps.com) • [www.nusports.com](http://www.nusports.com)

ELITE TRAINING\*TECHNIQUE\*BEACH\*VIDEO ANALYSIS—You don't want to miss this wonderful camp experience at NU! We provide a unique mix of swimming (training and technique) 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 new insights into our fabulous sport of swimming that help them to improve and enjoy their swimming experience. Contact us now! Don't delay because camps fill up annually.

Commuter Camp: June 15-19  
Commuter/Resident Camp: June 29–July 3

**OHIO STATE SWIMMING CAMPS**

**Bill Wadley, Camp Director**  
**McCorkle Aquatic Pavilion**  
1847 Neil Ave. • Columbus, OH 43210  
614-292-1542 • 614-688-5736 (Fax)  
Email: [Wadley.1@osu.edu](mailto:Wadley.1@osu.edu)  
[www.ohiostatebuckeyes.com](http://www.ohiostatebuckeyes.com)

Coaches Bill Wadley & Bill Dorenkott will lead the Ohio State camps with the assistance of Dave Rollins and Liz Hinkleman. The Ohio State staff will conduct the camp in a healthy, wholesome environment that will provide 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.

Evenings, Technique & Training: May 19-22; 27-30  
Commuter Technique & Training: June 9-12  
Commuter, Overnight  
Technique & Training: June 15-19; 22-26

**PINE CREST SWIM CAMP**

**Mariusz Podkoscielny, Camp Director**  
1501 N.E. 62<sup>nd</sup> St. • Ft. Lauderdale, FL 33334-5116  
954-492-4173 • Email: [swimming@pinecrest.edu](mailto:swimming@pinecrest.edu)  
[www.pinecrestswimcamp.com](http://www.pinecrestswimcamp.com)  
[www.pinecrestswimming.com](http://www.pinecrestswimming.com)

Come to the same location Olympic Coaches and swimmers visit year after year for their personal training camp. The cost for our overnight campers is \$825 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 \$595 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 34)

Overnight Camp: June 15-21; 22-28; 29–July 5; July 6-12; 13-19; 20-26; 21-27; 27–Aug. 1  
Competitive  
Day Camp: June 16-20; 23-27; 30–July 4; July 7-11; 14-18; 21-25; 28–Aug. 1

**TENNESSEE SWIM CAMPS**

**Matt Kredich, Coach**  
**Annabel Henley, Assoc. Director**  
2200 Andy Holt Ave. • Knoxville, TN 37996  
865-974-1258 • 865-974-1287 (Fax)  
Email: [Ahenley1@utk.edu](mailto:Ahenley1@utk.edu)  
<https://tennesseesportcamps.com/swimming/>

This is the most innovative, motivating and educational camp in America: Learn from and receive autographs from the best Olympic Swimmers in America, including Ryan Lochte! New Premiere option features – Rotty Tow Machine, Ikkos neuroplasticity learning, and the University of Tennessee Speed Circuit that helped UT win 3 of the 5 relays at the 2013 NCAA's! The University of Tennessee Swim Camp is recognized as one of the most innovative and educational camps in the country. Our goal is to provide an atmosphere where campers are excited to learn about all areas of competitive swimming. The Residential Camp provides the perfect opportunity for intermediate to advanced swimmers to learn the most advanced strategies in competitive swimming in a fun and supportive atmosphere. Open to boys and girls ages 8 – 19. Indoor and outdoor state-of-the-art swimming facilities. Limited enrollment (9:1 swimmer/coach ratio). So that coaches get to know each of the swimmer's needs. Sessions in mental training, nutrition, dryland and special topics. Videotaping of every swimmer with

subsequent analysis by Tennessee coaches is available. Each week will also include two Q and A sessions with our resident Olympian as well as an autograph session. Residential, Commuter, Elite and an exciting, new Premiere option is available for each session. (See display ad on page 41)

May 31–June 4: Session I; Ryan Lochte  
June 8-12: Session II; Peter Vanderkaay  
June 15-19: Session III; Davis Tarwater & Claire Donahue  
June 22-26: Session IV; Amanda Beard  
June 29–July 3: Session V; Scott Weltz

**TOTAL PERFORMANCE SWIM CAMPS**

**Jim Steen, Coach**  
108 Stevens St. • Mt. Vernon, OH 43050  
740-398-6403 • Email: [amisarti@tpscamps.com](mailto:amisarti@tpscamps.com)  
[www.tpscamps.com](http://www.tpscamps.com)

Legendary head coach and founder of Total Performance Swim Camps, Jim Steen, guided his Kenyon swimmers to an amazing 54 NCAA titles in 37 years while coaching numerous NCAA Champions, hundreds of All-Americans, and several Olympians. Since 1980, his formula for success and innovative ideas have been incorporated into a camp program that has seen over 10,000 participants from over 40 states and even 5 countries! Located on the beautiful college campuses of Kenyon College and Calvin College, TPSC's talented coaching staff includes Coach Steen, Jessen Book (Kenyon College) and Dan Gelderloos (Calvin College) as well as numerous other headlining coaches such as Mike Bottom (U of Michigan), Steve Crocker (former 50fs World Record Holder) and Arthur Albiero (U of Louisville). Come and experience the TPSC difference! For more information please visit us online or via email or by phone. Cost: \$595 for Competitive Stroke Camps; \$650 for Elite Camps; \$650 for Academic Camps for Swimmers; \$695 for Elite Distance Camp.

Kenyon College (OH):  
June 8-12: Competitive Stroke Week 1  
June 15-19: Competitive Stroke Week 2  
June 22-26: Competitive Stroke Week 3  
June 7–12: Elite Distance  
June 8-12: Elite Breaststroke  
June 15-19: Elite Sprint  
June 22-26: Elite IM

Academic Camps for Swimmers (Kenyon College):  
June 8-12: Literature  
June 15-19: Art  
June 22-26: Biology, Chemistry, Economics, Math

Calvin College (MI):  
June 22-26: Competitive Stroke

## VILLANOVA DISTANCE TRAINING AND FOUR STROKE CAMP

**Rick Simpson, Head Coach**  
 800 Lancaster Ave.  
 Villanova, PA 19085  
 610-519-7212  
 610-519-7442 (Fax)  
 Email: [Rick.simpson@villanova.edu](mailto:Rick.simpson@villanova.edu)  
[www.wildcatswimcamp.com](http://www.wildcatswimcamp.com)

Villanova Swimming prides itself on its long history of excellence in the distance events. Villanova athletes have experienced great success in the distance events including several back to back conference champions, record holders, NCAA qualifiers and Olympians from several nations. Now you can spend a week in the Villanova "D-Group"! 2 in-pool training sessions daily. Each Session will be directed by Coach Simpson personally. \* Dryland program \* Lunch break - provided in the Villanova Dining Hall \* Guest lectures and technical meetings covering race strategies and pacing, nutrition, health management in a high volume program, stroke technique, etc. \* Overnight and day camp available. The FOUR STROKE TECHNIQUE CAMPS - Each week, the Villanova coaching staff will focus on all aspects of competitive swimming. The camper will

be exposed to a variety of topics such as stroke technique, training methods, strength training, nutrition, and sports psychology. The Four Stroke camps are day camps only.

Distance Training  
 (Overnight & Day): June 23-27  
 Four Stroke  
 (Day Only): June 30-July 4  
 July 7-11

## TOM JOHNSON'S WYOMING SWIM CAMP

**O Thomas Johnson; Head Coach & Director**  
 Dept 3414  
 1000 E. University Ave.  
 Laramie, WY 82071-3414  
 307-766-6265  
 Email: [tomj@uwyo.edu](mailto:tomj@uwyo.edu)  
[www.wyomingathletics.com](http://www.wyomingathletics.com)

Wyoming Head Swimming Coach Tom Johnson hosts the 15th 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. Coaches Johnson, Matt Leach and Manny Noguchi and

the staff stress the importance of swimming with outstanding stroke technique in a positive training environment. The swim camps are held at the beautiful campus of University of Wyoming located 135 miles north of Denver, CO and is convenient to Denver International Airport as well as the Cheyenne and Laramie, WY Airports. The University of Wyoming offers an outstanding summer experience at 7220 feet, with the opportunity of altitude training at the highest Division I school in the United States. Wyoming Swim Camp is open to all, ages nine 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 by phone or email. 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.

June 1-6: Camp 1 & Intensive Camp1  
 June 6-8: Start and Turn 1  
 June 13-15: Start and Turn 2  
 June 15-20: Camp 2 & Intensive Camp 2  
 June 27-29: Start and Turn 3 ♦

(College/University Affiliated Swimming Camp)

# WORLD CLASS TRAINING AUBURN STYLE

# 2014 AUBURN SWIM CAMPS

ONLINE REGISTRATION WILL BEGIN ON NOV. 1ST, FOR THE FOLLOWING DATES:



Come Train at The James E. Martin Aquatics Center  
*"Where Champions Train"*

"HOME OF CHAMPIONS"  
**AUBURN UNIVERSITY**

86 Individual NCAA Champions 343 Individual SEC Champions  
 2,243 All-American Honors 49 Olympians Representing 22 Different Countries  
 32 Olympic Medals 13 NCAA Team Titles 23 SEC Team Titles

FOR MORE INFORMATION CHECK OUT



SESSION I, June 1-5

SESSION II, June 8-12

SESSION III, June 15-19

SESSION IV, June 22-26

BREASTSTROKE CAMP  
 May 10-11, 2014



BRETT HAWKE  
Two-Time Olympian



JOHN HARGIS  
Olympic Gold Medalist



ROWDY GAINES  
3-Time Olympic Gold Medalist



**MIKE BOTTOM**

Michigan Men's Coach  
US Olympic and Olympic Coach

**DR. JOSH WHITE**

Michigan Associate Head Coach  
NCAA All American and National Champion

**MARK HILL**

Michigan Assistant Coach  
3-time All ACC Swimmer



**JIM RICHARDSON**

Camp Manager  
2-time NCAA Coach of the Year

**RICK BISHOP**

Michigan Associate Head Coach  
USA Swimming National Team Staff Instructor

**DANIELLE TANSEL**

Michigan Assistant Coach  
NCAA Academic All American

## 2014 MICHIGAN SWIM CAMP

### REGISTER EARLY!

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



- Gambetta Dryland Training
- Technique and Intensive Training Options Available
- 3 Instructional Sessions Per Day
- Daily Individual HD Filming & 1:1 Analysis
- True Colors and Mindset Training
- Olympians and NCAA All Americans

**Brad Shively**  
Washington University Head Coach

**Kurt Kirner**  
Hillsdale College Head Coach

**Roger Karns**  
Lewis University Head Coach

*Michigan Swim Camp*  
8160 Valley View Drive Ypsilanti, MI 48197  
PH: 734-845-8596  
FAX: 734-484-1222

To register online go to: [www.michiganswimcamp.com](http://www.michiganswimcamp.com)  
E-mail: [umswim1@gmail.com](mailto:umswim1@gmail.com)

### 2014 Camp Dates

- June 8-12
- June 22-26
- June 29-July 3
- August 3-7

**NAVY**  
**SWIMMING-CAMPS**  
Since 1998

**2014 Swimming Camps**

<b>June 10-14</b> <b>June 16-20</b>	<b>\$680 Overnight</b> <b>\$630 Extended Day</b> <b>\$580 Commuter</b>	<b>Camp open to boys and girls ages 8-18.</b> Navy Swim Clinics June 14, 15 & 16	<b>Navy Swimming Camps</b> 566 Brownson Road Annapolis, MD 21402 <a href="mailto:navyswimmingcamp@usna.edu">navyswimmingcamp@usna.edu</a> (410) 293-5834 or 3012
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[www.NavySwimmingCamp.com](http://www.NavySwimmingCamp.com)      [www.NavySports.com](http://www.NavySports.com)



### SPRING BREAK SWIM CAMP

Limited enrollment of 32  
Day and Overnight camp available.  
April 14–18, 2014



### SUMMER CAMPS 2014

#### For 9-13 year olds - *Goals Growth and Greatness*

Limited enrollment of 48  
Day and Overnight camp available.

June 17–21

June 24–28

July 6–10



#### For 14-18 year olds - *Reach Risk and Race*

Limited enrollment of 32  
Day and Overnight camp available

June 30– July 3

*Low swimmer to coach ratio*

*International level swimmers will be training during camps.*

*Camps run by the NBAC Coaching staff!*

*Learn to train the NBAC Way!*

www.nbac.net

410-433-8300

jcadigan@nbac.net

# T 2014 TENNESSEE SWIM CAMP T



### Head Coach Matt Kredich

2013 CSCAA National Collegiate and Scholastic Swimming Trophy Recipient

2013 SwimSwam.com Coach of the Year

2 Time SEC Coach of the Year

Coach of former American Record Holder Christine Magnusson

### FEATURING

Ryan Lochte

Amanda Beard & Peter Vanderkaay

Davis Tarwater & Claire Donahue

Masters Camp

Racing Skills Camp



Be part of Tennessee innovation

<https://tennesseesportcamps.com/swimming/>

Easy-to-Make Recipes for a Healthier You

If you want to become a better swimmer, you need to work hard, get sufficient rest and eat healthy. It's a fact: good nutrition can help athletic performance.

Following are two recipes that are easy to make. Both meals are low sodium, low cholesterol and low fat:

- You cook with broth instead of oil or butter.
- You use low-sodium soy sauce instead of salt.
- For a sweetener, use apple juice concentrate.

And the best part? They're delicious!



**BEAN AND CORN CASSEROLE**

**INGREDIENTS:**

- 1 can cannellini beans
- 2 cups corn (frozen is fine)
- 1 can diced tomatoes (drained)
- 1 teaspoon low-sodium soy sauce
- 1 teaspoon paprika
- 2 teaspoons apple juice concentrate (thawed)
- 1 tablespoon onions (grated)
- 1/4 cup bread crumbs, toasted

**DIRECTIONS:**

- Pre-heat oven to 350 degrees.
- Mix together beans, corn, tomatoes, soy sauce, paprika, apple juice and onion.
- Place in a non-stick baking pan. Sprinkle the top with bread crumbs.
- Bake for 25 to 30 minutes.

**CHICKEN AMIGO**

**INGREDIENTS:**

- 1 whole chicken (no skin, bone in, cut into serving pieces)
- 1/2 cup chicken broth
- 1 large onion (chopped)
- 1 clove garlic (peeled and chopped)
- 1 medium green pepper (chopped)
- 1 can diced tomatoes
- 1/2 cup dry sherry
- pinch of cayenne
- pinch of saffron
- 2 whole cloves
- 1 bay leaf
- 1-1/4 uncooked long-grain rice
- 1 cup water
- 1 cup peas (frozen is fine)
- 1 small jar pimento

**DIRECTIONS:**

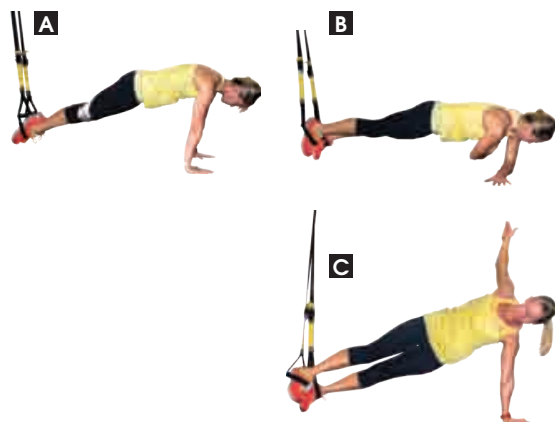
- In a soup pot, sauté the broth, onion, garlic and pepper until the onion is clear (about 5 minutes).
- Add the tomatoes, sherry, spices, rice and water.
- Stir together, then add chicken pieces on top.
- Bring to a boil, then lower heat and cover pot.
- Cook at a simmer for 30 minutes. (Note: If it starts to look dry, add more water.)
- Before serving, remove bay leaf and cloves.
- Garnish with the peas and pimentos.



# TRX SUSPENSION TRAINING

BY J.R. ROSANIA  
PHOTOS BY KAITLIN KELLY  
DEMONSTRATED BY TAMMY GOFF

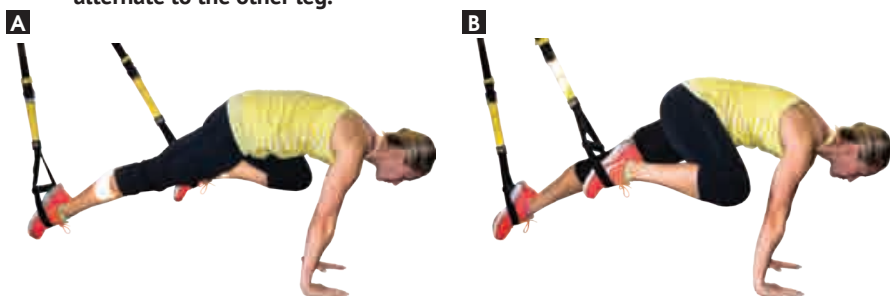
**1 PRONE ARM SWINGS** Start in a push-up position with your feet in the straps. Lift one arm off the floor and bring your arm under your chest. Then swing your arm outward and straighten it toward the sky. Return to the floor and repeat. Do both arms.



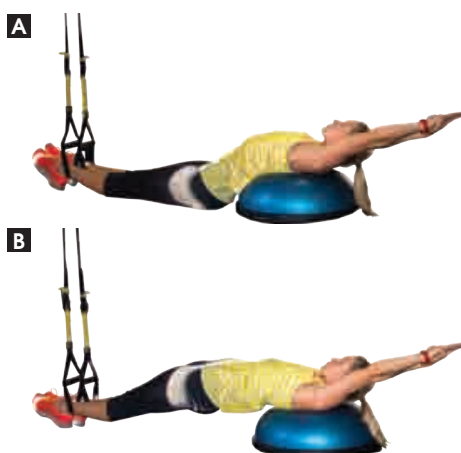
**2 ALTERNATING ARM STROKE** Begin in a standing position with both arms extended overhead while leaning forward. Pull one arm downward in a stroke-pull motion. Return and alternate to the opposite side.



**3 SUSPENDED MOUNTAIN CLIMBERS** Begin with your feet in the straps and in a push-up position. Bring a knee upward toward your chest. Return and alternate to the other leg.



**4 SUPINE DOLPHIN UNDERWATERS** Lying on your back with your shoulders on a Bosu ball and your feet through the TRX straps, begin a dolphin kick movement with your core area. Lift your hips as high as possible, then lower your hips downward. Repeat.



In last month's *Swimming World Magazine*, I introduced TRX suspension straps exercises. This month, we will again look at four TRX exercises that can help with your stroke technique.

I love TRX straps because they force you to work on your body position and strengthen your core. They create instability with each exercise, which in turn will cause you to feel more unstable, like swimming.

I like doing core and stroke-specific movements for strokes, turns and underwaters.

Perform each exercise for three sets of 15 reps. The resistance is changed by your body position. Therefore, establish a position that allows you to complete all the reps. ♦



*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, and has finished the Ironman Triathlon 18 times. He also serves as Swimming World Magazine's fitness trainer and was named one of "America's Top Trainers" by Men's Journal and Vogue magazines. Check out Rosania's website at [www.jrhealthplex.net](http://www.jrhealthplex.net).*

*Tammy Goff is a Masters swimmer and a firefighter from Glendale, Ariz.*

# ASK DR. SHANNON

# Q WHAT CHEST STRETCHES DO YOU RECOMMEND FOR SWIMMERS?

Dr. Shannon McBride, a licensed chiropractor based in Atlanta, Ga., has been practicing since 2001. She also is certified in Pilates through Power Pilates and the Pilates Method Alliance.

BY SHANNON McBRIDE  
PHOTOS PROVIDED AND DEMONSTRATED BY SHANNON McBRIDE

## CHEST STRETCH #1

1. Stand tall and grasp your hands behind you.
2. Fold forward from the waist and raise your arms as high as you can comfortably. *If you feel this in your low back or hamstrings, gently bend your knees.*



*Hold for 30 seconds and repeat three times.*

## CHEST STRETCH #3

1. Stand in a doorway with your arms out to the sides.
2. Elbows should be bent to 90 degrees and at the level of your shoulders.
3. Step one foot forward and lean forward until you begin to feel a stretch in your chest.



*Hold for 30 seconds and repeat three times.*

## CHEST STRETCH #2

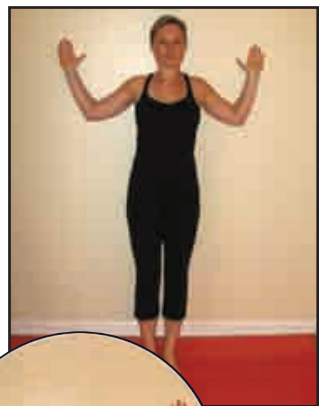
1. Kneel on the floor in front of a chair.
2. Make "genie arms" and place your elbows at the front of the chair.
3. Lean your head through your arms so that you begin to feel a stretch in your chest.
4. Breathe deeply and relax into the stretch.



*Hold for 30 seconds and repeat three times.*

## CHEST STRETCH #4

1. Stand against a wall and walk your feet about six inches from the wall.
2. Raise your arms with the elbows at shoulder height and bent at 90 degrees.
3. Without letting your lower back arch, try to get the back of your hands flat against the wall and your elbows against the wall.
4. Gently raise and lower your arms, keeping your elbows bent at 90 degrees.



# CHARLES YOURD

BY MICHAEL J. STOTT  
PHOTO BY PETER H. BICK

CHARLES YOURD HAS USED A POOLSIDE EDUCATION ACQUIRED FROM SOME OF THE SPORT'S BEST MINDS TO LIFT A SMALL ILLINOIS YMCA PROGRAM TO YET ANOTHER SILVER MEDAL RANKING IN USA SWIMMING'S CLUB EXCELLENCE PROGRAM.



## CHARLES YOURD

Head Coach  
WAVES Bloomington-  
Normal YMCA Swim Team  
Bloomington Illinois

Charles Yourd's (University of California Santa Barbara, B.A., economics, '77) swimming apprenticeship has served him well. He swam for Olympic coach Gus Stager at Michigan and then spent years as an on-deck student and/or volunteer assistant with the likes of Skip Kenney, Richard Quick, Paul Stafford, Ray Mitchell, Dick Jochums and John Bitter. In 2014, the WAVES are again a USA Swimming Club Excellence Silver Medal club. At Bloomington, Yourd's swimmers have achieved more than 130 NAG Top 10 or Top 16 rankings. Five have earned NCAA All-American distinctions. An ASCA level 5 coach, Yourd was named Illinois Age Group Coach of the Year in 2002 and Senior Coach of the Year from 2005 through 2008.

**Q. SWIMMING WORLD:** *What was it like swimming under USA Olympic coach Gus Stager at Michigan?*

**A. COACH CHARLES YOURD:** He had high standards and believed in hard work and swimming fast in practice. He expected performance, and he would get in your face if he thought you could do better. He was a boxer and understood swimming's mental, physical and tactical similarities much the way Randy Reese and Dick Jochums do. Gus was a tough personality on the pool deck and a great person away from it.

**SW:** *What did you learn from coaching greats before your first coaching job?*

**CY:** That there are common threads to great coaching. The first was that the goal for any well-coached club or collegiate program is success in long course national and international senior competition. Second, the top coaches learn by being on deck with the great coaches. From Dick Jochums and John Bitter at Santa Clara Swim Club, I learned the importance of high standards,

mental toughness, confidence through challenging training, the importance of team culture and the many years required to develop it. From Skip Kenney and Richard Quick at Stanford, I saw the value of high standards, relationships, team culture and the significance of contributions by every team member. Paul Stafford and Ray Mitchell of the Terrapins really stressed technique, team structure and a long-term approach to athlete development. Jack Simon, age group coach of Joseph Schooling, taught me about leadership and how to make training interesting.

**SW:** *Despite your Michigan and Cal connections, you chose the resource-challenged Bloomington Y...*

**CY:** Bloomington offered a blank slate to implement my philosophy and strategy for athlete development. I wanted to prove it is possible to get kids fast anywhere—under any circumstances. From a small, non-swimming community in the middle of nowhere with limited

— continued on 47

YEZAN ALSADER, GRACE ARIOLA AND MELISSA PISH

BY MICHAEL J. STOTT



[PHOTO PROVIDED BY CHARLES YOURD]



[PHOTO PROVIDED BY CHARLES YOURD]



[PHOTO BY PETER H. BICK]

**FAVORITE SETS AND DRILLS:**

**FREESTYLE ENDURANCE (SCY):**

- 4 x 100 on 1:20
- 4 x 100 on 1:15
- 4 x 100 on 1:10
- 3 x 100 on 1:15
- 3 x 100 on 1:10
- 3 x 100 on 1:05

*(Hold steady pace as intervals get shorter)*

**IM SWITCHING (SCY):**

*Yezan Alsader (11-12 400 meter IM NAG record holder) makes these intervals:*

- 4 x 100 on 1:20, fly/back x 50
- 4 x 100 on 1:20, back/breast x 50
- 4 x 100 on 1:20, breast/free x 50

*(Preceding set done in 100-yard repeats, swum as 50 yards of one stroke and 50 yards of the next stroke)*

**FAVORITE DRILLS:**

- 8 x 25 on :35  
*(dolphin kick on the back)*
- 4 x 25 on :60, backstroke  
*(cup on head)*
- 8 x 50 on :60, breaststroke  
*(pull with paddles) ♦*

**H**eather Fort, head age group coach at the Bloomington-Normal (ILL.) YMCA, has developed the club's three latest highly ranked age group athletes, all of whom moved to the club's performance team following this summer's junior nationals.

Fort, the 2012 and 2013 Illinois Age Group Coach of the Year, says the three have bought into program values, understand the swim development process, are committed to going fast in practice and have great parental support.

"All three are highly competitive and have aggressive personalities in the water," she says. "They love to race in meets and at practice. They enjoy being challenged, whether it's a tough set or a difficult competitive situation. They are confident behind the blocks, very humble, great team players and leaders."

**Yezan Alsader** broke the national age group (NAG) 11-12 record in the 400 meter IM twice last summer and finished the season with the nation's fastest 400 IM and 800 freestyle times (4:52.24, 9:02.54) for 12-year-old boys.

"He is a swimmer who hates to lose," says Fort, who coached him for almost five years. "He holds himself to a high standard and is unafraid of work. He is times-oriented and does what it takes regarding race splits or training pace to achieve a goal."

**Grace Ariola** ended the summer with 10 No. 1-ranked NAG times:

**Long Course (age 13):**

- 200 back (2:17.08)

**Long Course (age 12):**

- 100 free (59.44)
- 50-100-200 back (30.57, 1:05.02, 2:20.10)

**Short Course Yards (age 12):**

- 200 free (1:52.32)
- 100-200 back (56.41, 2:03.66)
- 100-200 IM (58.77, 2:06.59)

"Grace's stubbornness is an asset in her racing and in figuring out how to apply knowledge acquired through reading or experimentation," says Fort. "She likes to get things just right, and also likes to ask questions in order to understand 'why' something is important. She is extremely intelligent and observant. The inquisitiveness helps her understand technique and the different ways swimmers are doing skills/racing to get faster."

After scoring at the 2013 Speedo Summer Junior Nationals, **Melissa Pish** had the nation's second fastest times for a 13-year-old in the 200 and 400 meter freestyles (2:04.24, 4:17.51).

"She is laid-back and low-key both in practice and at meets," says Fort. "That helps her stay relaxed and not get nervous before big races. However, Melissa knows how to flip the switch and put on her game face before competition. She has a natural pacing instinct and does an excellent job of regulating her emotional energy and maintaining race focus." ♦

SWIMMINGWORLDMAGAZINE.COM

Total Access members click here at [www.SwimmingWorldMagazine.com](http://www.SwimmingWorldMagazine.com) to see a progression of times for Yezan Alsader, Grace Ariola and Melissa Pish.

facilities, we have developed ambitious kids to be nationally and internationally elite.

**SW:** *No 50-meter pool and virtually no financial support—how do you make it work?*

**CY:** Through five key factors:

- YMCA support providing a high-level competitive program that meets the Y's strategic goals for youth development.
- Creative use of limited resources.
- An outstanding coaching staff that teaches correct movement patterns, proper physical and mental training and much more.
- A philosophy of training and competition that guides everything we do.
- Great young people and families who make it fun to coach.

**SW:** *How did you change the culture and training habits?*

**CY:** From my Santa Clara days, I knew what it took to win a national championship. At Bloomington, no one knew (his or her) best times, and practice attendance was rare and sporadic. High-level swimming was the local summer league championship. There was no understanding of the training habits, attitude and the commitment essential to being elite senior athletes. I knew it would take years. I focused on our youngest swimmers. Legendary Australian coach Forbes Carlile taught me, "As the twig is bent, so the tree will grow."

**SW:** *Why is your program geared toward mid-distance racing?*

**CY:** I enjoy coaching ambitious kids interested in learning by working hard and smart.

**SW:** *How do you teach proper stroke technique and rhythm at an early age?*

**CY:** We work on movement patterns and kinetics in every practice. We also look for attentiveness and application, a willingness to be uncomfortable and for people who value the process. Our most successful swimmers trust and believe

in us as coaches, have a drive to prove themselves, are mentally and emotionally mature and have parents who support the coaching staff, the team culture and their children.

**SW:** *Talk about the window of opportunity and biological development....*

**CY:** We use a sophisticated analysis of individual maturation by screening a variety of developmental aspects. Some important factors are endocrine, skeletal, nerve activation, cardiovascular, mental and emotional. Development and swim training need to be on an individual basis since people mature at different ages and at different rates. For instance, there is an emerging endocrine window for girls of about two years. They must be mentally and emotionally mature enough to capitalize on that window. If they miss it, it's gone forever.

**SW:** *Coaching character is intrinsic to what you do....*

**CY:** It's not just about being in the water. It's about becoming a better person. We're helping develop great young people. Our philosophy of training and competition, our curriculum for character development and our teaching about becoming an elite senior athlete is who we are as coaches. It also fits the YMCA purpose of youth development.

**SW:** *What's the importance of educating the parents?*

**CY:** Parents are one leg of the three-legged stool that supports the athlete on a successful journey. The other legs are team and the coach. The team culture keeps the legs stable and strong. It is the coach's job to educate the parents on how to support their child in the quest for excellence.

**SW:** *You say, "Talent helps, but it won't take you as far as ambition."...*

**CY:** To be successful, a child must have an inner drive. If it's there in the young swimmer, then we're on our way. It can be obvious in a personality or behavior, but many times it is hidden, and even the swimmer—or a parent—may not be aware of it. Visible or hidden, that drive

**"TO BE SUCCESSFUL, A CHILD MUST HAVE AN INNER DRIVE. IF IT'S THERE IN THE YOUNG SWIMMER, THEN WE'RE ON OUR WAY."**

**—CHARLES YOURD**

must already be resident. As coaches, we can't create it. We can only develop and enhance what is already there.

**SW:** *You really challenge your athletes....*

**CY:** We give them the confidence to take risks and go after what they want in life. At some point, they grow up and realize that the experiences they had with us were something rare, and they find them helpful as adults.

**SW:** *Some real stars have come out of your program....*

**CY:** Emily Hanson went from being a 50 breaststroker at age 10 to competing in two FINA World Championships as a member of the USA national open water team.

Monica Drake at age 14 was on the podium at summer nationals, finishing seventh in the 1500. She ranked No. 1 in the nation at 1650 for 13-14 girls and became an American record holder in the last race of her swimming career, going 47.42 to anchor Arizona's 400 free relay at 2013 NCAAs.

Lindsay Gendron, now in her senior year at Tennessee, is an 18-time NCAA All-American in a full range of event distances—200 free relay to 1650—with short course yards best times for the 50, 21.82 (relay split); 100, 48.15 (relay split 47.46); 200, 1:43.22; 500, 4:36.71; and 1650, 16:01.38. ♦

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*Michael J. Stott, one of Swimming World Magazine's USA contributors, is based in Richmond, Va.*

# Paying Tribute

BY SHOSHANNA RUTEMILLER



[PHOTO BY VILANUEVA STONE]

IN HONOR OF HER COACH AND CLOSE FRIEND WHO DIED FROM CANCER, SWIMMER ALLI DEFRANCESCO—HERSELF A CANCER VICTIM WHO BECAME CANCER-FREE AFTER SURGERY AND CHEMOTHERAPY—SUCCESSFULLY CROSSED THE ENGLISH CHANNEL IN HER MEMORY.

At 3 a.m., Aug. 28, last summer, Alli DeFrancesco set out into the night for her second attempt at swimming across the English Channel. When she stepped foot on the French shores just over 11 hours later, the weight of her accomplishment went far deeper than just the physical.

Four years prior to accomplishing the swim, DeFrancesco was weak from chemotherapy treatment. She was losing her hair, her freedom and her ability to swim collegiately for New York University. In 2009—at 21 years old—DeFrancesco was diagnosed with Hodgkin's lymphoma, a diagnosis she stumbled upon after seeking treatment for her extensive shoulder pain and frequent sinus infections.

"When I first started experiencing the symptoms, I was going into my senior year at New York University," said DeFrancesco.

"Plagued with injury the first three years—a torn ligament in my ankle prohibited me from competition—I rejoined the team only to find myself sidelined again, this time with persistent sinus infections."

But DeFrancesco's personal health struggles were just the tip of the iceberg. Just three weeks prior to her diagnosis, DeFrancesco's collegiate coach and close friend, Lauren Beam, was diagnosed with colon cancer. Although faced with her own grueling treatments, Beam continued to guide and mentor DeFrancesco, telling her swimmer to take things one day at a time.

"When my doctors suggested surgery, I knew my season was over," said DeFrancesco. "I forfeited my double major, graduated early and returned home to focus on my health. Back home in San Diego, I was diagnosed with Hodgkin's in April 2009. My first

day of chemotherapy was May 15, 2009—the day that my graduating class walked at Yankee Stadium."

DeFrancesco left New York and transferred her treatment to UCLA. The move was emotional and confusing for DeFrancesco, who decided to complete her art history degree a semester early so that she could focus on her health.

## MOTIVATION TO SWIM THE ENGLISH CHANNEL

Then, in 2011, tragedy hit again: Beam, DeFrancesco's constant supporter, had succumbed to colon cancer. DeFrancesco and Beam had supported each other during their personal treatments and were consolatory during difficult times. At the time of Beam's death, DeFrancesco was cancer-free. As a tribute to the memory of her coach and close friend, DeFrancesco decided to train to swim across the English Channel. She hoped the swim would also inspire other young cancer patients.

DeFrancesco attempted her first crossing in September 2012 after a year of training. Unfortunately, gale force winds caused her crew to cut the swim short. DeFrancesco

## DESCRIBE YOUR PERSONAL EXPERIENCE SWIMMING ACROSS THE ENGLISH CHANNEL:

“It was the swim of a lifetime and a true testament to all the training and preparation. I got blown out (in 2012) due to a gale storm, which I have learned is par for the course among many of my open water swimming peers, yet definitely a blessing to have an extra year to fine-tune everything.

“Prior to jumping in the water, I was a nervous ball of energy. I had practiced night swims, but never before had I swum next to a boat—let alone one in pitching seas—nor had I any idea what the water temperature would be outside Dover Harbor, where I had been training while waiting in England.

“Even my first two strokes, I remember thinking to myself, ‘This is going to be a bad day at home, all day.’ But then I remembered that I was prepared. I had seen more trying days. And the jukebox in my head started playing, which allowed me to avert my attention to the task at hand, thinking, ‘Wow! This is me swimming the English Channel! Today, I am swimming the English Channel! How cool is that?’

“The most trying part came at the French inshore waters, but I knew to expect it. With land in clear sight, less than 2 kilometers away, I began swimming in place for some time. To my amazement, my crew continued clapping and cheering me on while I became violently ill in 18 mph crosswinds; I couldn’t see why they were so excited. I kept looking back to the boat from behind my teary-eyed goggles, praying that the boat would stop, for that would mean I was in shallow-enough water. Then it happened—the boat stopped. And it was just me. I assured myself, ‘I will finish the Channel today.’

“Only when I got back to the boat did I learn my time, the actual water temperature, the course—at no point did I have any idea where I was; I made my crew promise not to tell me even if I asked—and ultimately receive confirmation that I had become the first Italian woman to successfully complete the swim.” ♦



[PHOTO BY BRIAN FINN]

returned home disappointed, but resolved to come back even stronger the following year and accomplish her goal.

Her second attempt was successful, and DeFrancesco reached the French coast in 11 hours 14 minutes. She had overcome two- to three-meter sea swells, and 10-to-14 mile per hour winds, with gusts reaching 18 mph. Apart from the weather, DeFrancesco also had to avoid jellyfish, cold water and commercial shipping boats—all without a wetsuit.

Finishing the race was emotional for DeFrancesco, who is now the first Italian woman to complete the swim. She continues to take her health issues in stride—including a bone marrow transplant as part of the residual side effects of her Hodgkin’s Lymphoma treatments—with just the memory of her coach, friend and mentor, Lauren Beam, to comfort her.

### Q&A WITH ALLI DEFRANCESCO

#### Why did you decide to take on the English Channel?

“Following Lauren’s passing in September 2011, I felt that I had been given a unique opportunity to do something momentarily positive in spite of a negative series of events—to challenge myself back on my feet, to say thank you (to Lauren) when I couldn’t say it enough and to give back to my peers undergoing similar circumstances.

“I wanted to do something recognized

“ONE DOES NOT JUST WAKE UP AND SWIM THE ENGLISH CHANNEL, AND, SIMILARLY, A CURE FOR CANCER DOESN’T COME OVERNIGHT.”

— ALLI DEFRANCESCO

as universally challenging as cancer, but also within my means. You mention cancer to anyone on the street, and they wince. (You’d be) hard-pressed to find someone who isn’t affected by it. You mention the English Channel to that same person and, most likely, you won’t have to offer too much of an explanation. With the ocean at my door, an A-team of coaches assembled, and an extensive swimming background, (crossing the English Channel) seemed like the obvious choice.

“What I didn’t know then, however, were the many similarities between training for such an event and battling cancer: taking a risk, committing to a plan, preparing for the unknown, knowing the possibilities and using all your energy to fight for the best outcome. One does not just wake up and swim the English Channel, and, similarly, a cure for cancer doesn’t come overnight.” ♦

# UP & COMERS

AGE GROUP SWIMMER OF THE MONTH

BY SHOSHANNA RUTEMILLER • PHOTO BY CHRISTOPHER RATTRAY

## CASSIDY BAYER

CASSIDY BAYER HAD THE ENTIRE CROWD AT THE TOM DOLAN INVITATIONAL, DEC. 12-15, IN COLLEGE PARK, MD., ON ITS FEET AS SHE CHASED DOWN MARY T. MEAGHER'S 13-14 GIRLS 200 YARD BUTTERFLY NATIONAL AGE GROUP RECORD.

Bayer, who swims for the host team Nation's Capital (NCAP), flew to the finish half a body length ahead of the "A"-final field, touching the wall in 1:56.01. Her time finally fell Meagher's 1:56.58 record, a 30-year-old monument in the sport of swimming.

Meagher set the NAG mark in 1979 when she was 14 years old—the same year she set a world record in the 200 meter butterfly (2:09.77). Meagher



eventually lowered her world record by nearly four seconds to 2:05.96 in 1981. That mark stood untouched until 2000, when Australia's Susie O'Neill finally broke it. But none of the incredible U.S. butterflyers who came up through the years (Misty Hyman, for example) managed to take down Meagher's 200 butterfly NAG mark...that is, until Bayer came along.

### A CONFIDENCE BOOSTER

Frankly, Bayer's swim was all the more remarkable because of the history and mystique surrounding Meagher's butterfly career as a young teenager. Could Bayer's swim foreshadow a historic career like Meagher's? Possibly. But for the time being, Bayer is more than happy to celebrate her current 200 butterfly victory.

"It gives me a lot of confidence going into other swims," Bayer said in a *Swimming World* interview after the race. "I got really nervous before the race, but now I really know what it feels like to accomplish that type of success."

Even though Bayer prepared as best she could for the race—even sitting up in her hotel room the night before the final race with her dad to break down her 200 butterfly splits by 50—when her final 1:56.01 came up on the scoreboard, Bayer admits that she didn't believe it was real.

"I was so shocked with that time. I had to ask a couple of people a couple of times what my actual time was," she said. "My dad told me I made him cry (because he was so happy)."

This isn't the first time 14-year-old Bayer has impressed those who have watched her swim. At the U.S. National Championships and World Trials, Bayer—then 13 years old—was the second youngest swimmer at the meet. She placed 13th in the 50 meter butterfly and won the "C" finals in both the 100 and 200 fly. But Bayer has always had her eye on Meagher's 200 yard butterfly national age group record.

"I have that time (1:56.58) on my mirror back home," Bayer said. "I look at it every day."

### MORE THAN A FLYER

However, before we pigeonhole Bayer as just a 200 butterflyer, let's take a look at her results from the Tom Dolan Invitational: the teenager also won the

13-14 girls 50 and 100 freestyle (23.29, 51.08), 100 backstroke (54.90), 100 fly (53.42) and the 200 and 400 IM (2:01.44, 4:15.65). Bayer's NCAP coach, Jeff King, hasn't let her versatility slip by unnoticed.

"My coach and I sat down a couple of weeks ago, and he said to me, 'You know, you're not going to like this, but I think you are going to be a 200 butterfly/400 IMer,'" said Bayer. She paused, and then added: "You know, maybe I could be a 400 IMer also."

Watch out, world...here she comes! ✦

**"I GOT REALLY NERVOUS BEFORE THE RACE, BUT NOW I REALLY KNOW WHAT IT FEELS LIKE TO ACCOMPLISH THAT TYPE OF SUCCESS."**

**—CASSIDY BAYER**

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# THE LEGENDARY MARY T

BY SHOSHANNA RUTEMILLER

PHOTOS BY TIM MORSE



ary Terstegge Meagher Plant—more commonly known by the nickname, Mary T—was a swimming sensation in

the 1970s and '80s. She became known as “Madame Butterfly” during this era because of her dominance of that stroke.

*Swimming World Magazine's* September 1979 issue was the first to feature Mary T on the cover. Her picture inside was run alongside the following outline:

*They call her Mary T. The “T,” an abbreviation for her mother’s maiden name, could also stand for T-rrrific! The 14-year-old Meagher from Lakeside Swim Club in Kentucky broke the world record in the 200 meter butterfly (2:07.01) and set an American mark in the 100 fly (1:00.19). Mary T. Meagher, coached by Denny Pursley, was the most colorful performer of the AAU Long Course Nationals in Fort Lauderdale.*

This short introduction marked just the beginning of Mary T’s long-running career. Before retiring from swimming following the 1988 Seoul Olympics, Mary T was ranked first in the world eight times in the 200 meter butterfly and seven in the 100 fly. She set a world record in the 100 twice

and in the 200 five times—each time breaking her own previous best mark.

One of the highest points of her career was at the 1981 summer nationals in Brown Deer, Wis., where, as a 16-year-old, she set her final world records in the 100 and 200 meter fly. Her respective 57.93 and 2:05.96 world record marks lasted nearly 30 years!

Before Mary T, no other swimmer had even broken 59 seconds in the 100 fly nor had gone faster than 2:07.83 in the 200 fly. Upon retiring, Mary T owned the 11 fastest performances of all time in the 200 and seven of the 10 quickest in the 100. She won triple gold medals at the 1984 Olympics.

**RECORDS BROKEN...  
(AND SOME STILL UNBROKEN)**

Although it took nearly two decades, one by one, most of her records fell. Her 100 meter fly world record was broken 18 years later in 1999 to American Jenny Thompson (57.88). Mary T's 200 meter fly world record lasted a single year longer, falling to Australia's Susie O'Neill (2:05.81) in 2000.

Still, no female was capable of accomplishing what Mary T did at the age of 14. Thompson and O'Neill were both an experienced 26 years of age when they, respectively, claimed Mary T's 100 and 200 fly world records.

Mary T's dual world record performance at age 14 was the stuff of legends, often causing her other—perhaps equally impressive—marks to be overlooked. One such mark was Mary T's girls 13-14 200 yard butterfly U.S. national age group record. Set in 1979, her 1:56.58 time remained untouched for a remarkable 34 years...

...until Cassidy Bayer came along (see "Up & Comers," page 50).

The 14-year-old from Nation's Capital Swim Club did what previous American butterfly age group sensations such as Thompson and Sydney Olympic 200 butterfly champion Misty Hyman were unable to do: claim Mary T's record.

Bayer downed the historic record at the 2013 Tom Dolan Invitational in the meet's Saturday night finals, Dec. 14. Bayer touched the wall at 1:56.01, nearly a pool length ahead of her competition and over a half-second under Mary T's former

— *continued on 54*



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## THE LEGENDARY MARY T

— continued from 53

record—and so ended Mary T's presence on USA Swimming's 13-14 short course national age group record charts.

Mary T still holds four NAG records: the girls 13-14 200 meter fly (a world record 2:07.01 set in 1979), the girls 15-16 100 and 200 meter fly (world records 57.93 and 2:05.96 set in 1981) and the girls 15-16 200 yard fly (1:52.99 from 1981).

Mary T also shows up on the U.S. Open record charts. Set at age 16 at the 1981 U.S. Nationals, Mary T's 2:05.96 200 meter butterfly world record swim remains untouched 32 years later. Present day, the 200 butterfly American record is held by Mary DeScenza (2:04.14), and the world record is held by China's Liu Zige (2:01.81).

At age 15 and with two world records under her belt, Mary T was expected to claim multiple Olympic medals at the 1980 Moscow Games. Unfortunately, the United States boycotted the Games, causing Mary T to wait another four years for her Olympic gold. She would eventually win three gold medals at the 1984 Los Angeles Olympics, winning the 100 and 200 fly and women's 400 medley relay. Meagher retired from the sport following the 1988 Seoul Olympic Games just prior to her 24th birthday.

### MARY T AND SWIMMING WORLD MAGAZINE

During her career, Mary T was on the cover of *Swimming World Magazine* a remarkable five times, first in September 1979 at age 14. The other covers were in February and September of 1981, November 1986 and January 1989.

Exclusively for *Swimming World Magazine*, Mary T kept a personal account of her final season of training leading up to the 1988 Olympics. Her personal journals were published in the magazine's January 1989 issue.

In her journal, Mary T discussed her disappointing performance at the Games and her regret at coming away with only an individual bronze medal. The triple Olympic gold medalist and world record holder placed seventh in the finals of the 100 fly and third in the 200.

Here is an excerpt of what she wrote after the finals of the 100 butterfly:

*"I got seventh in the finals last night, which was hard to take. I did do the best*

*I possibly could, but so many questions without answers plagued my mind. Why did I only go a 1:00.9 when my best is a 57.9 and my time from Trials was a 59.8? Is my technique off? Do I not have the same strength as before? Did I lose too much flexibility during my five-month break last year? It's just hard for me to believe that I've changed so much in some way that I can't go as fast as I used to. Why?"*

Following her heartbreak in the 100, Mary T finished third in her signature event, the 200 fly, to East Germany's Kathleen Nord. Mary T's time from the U.S. Trials (2:09.13) was actually faster than Nord's winning time (2:09.51) at Seoul. Following is an excerpt of what she wrote in *Swimming World*:

*"I was optimistic about my ability to win all day after prelims. In the morning, I felt really good, staying long and strong. I qualified third, but all eight of the finalists were within a little over one second of each other. I can't say I ever really concerned myself with the other five finalists, though—only with the East Germans who had qualified first and second ahead of me.*

*"I felt good in warm-up and had my nerves under control. I don't remember much after that, though, even after the race. It all seems like a blur, or maybe some kind of bad dream...."*

*"I wasn't ready to accept the fact that I had just gotten third place in my biggest Olympics and last meet. I dreaded having to stand on the awards stand and hear the East German national anthem...."*

*"It's OK, though. I'm starting to look ahead again, and I am excited to move on."*

### PASSING THE TORCH

Although Mary T has moved on from swimming, her records and legendary career remain embedded in the history of the sport. "Madame Butterfly's" times and accomplishments are still held as the benchmark to which every talented young butterflyer is compared.

Can 14-year-old Bayer live up to the standards that remain in front of her? Will she eventually create her own path and legacy like Mary T did in the 1980s?

Whether or not she does, Bayer can continue to develop her talent, knowing that she claimed a national age group record from one of the most talented age group butterfly swimmers in the history of swimming. ♦

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The Longhorns Swim Camp at The University of Texas at Austin is seeking mature, motivated and team-oriented individuals to be part of its 37th year!

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For more information/application, check our employment section at [www.LonghornswimCamp.com](http://www.LonghornswimCamp.com). Completed applications accepted through March 8, 2014 or until positions filled.

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### CAMP COUNSELORS/ COACHES:

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.

Five one-week sessions (June 8-12, 22-26, 29-July 3, Aug. 3-7). Room, board, local telephone plus \$520/week salary and \$125 travel expense help.

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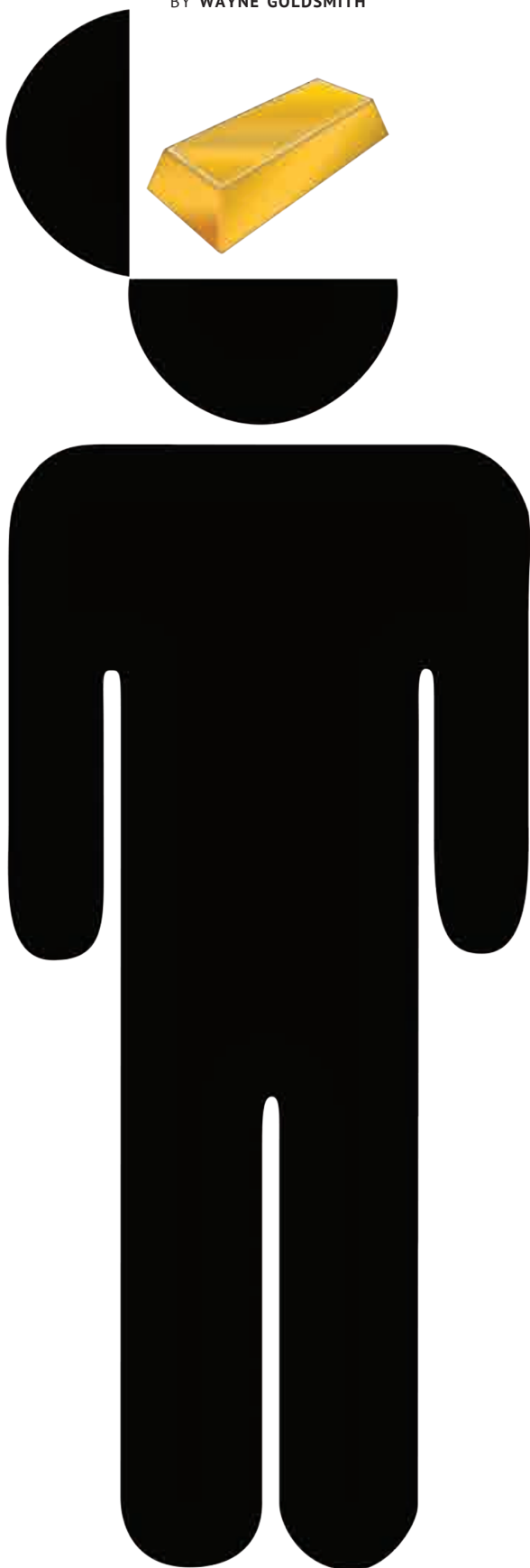
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# goldminds

BY WAYNE GOLDSMITH



TRANSITION POINTS: HOW TO PROGRESS YOUR SWIMMING CAREER...FASTER!

**A TRANSITION POINT IS A STAGE IN YOUR SWIMMING CAREER WHERE YOUR LEVEL OF ACHIEVEMENT IS DETERMINED BY THE DECISIONS AND CHOICES YOU MAKE IN YOUR TRAINING EVERY DAY.**

Want to be a better swimmer, but you're frustrated at your lack of improvement?

Dream of winning gold medals and breaking records, but just can't seem to be able to find that extra second or two that you need to turn your dreams into reality?

Know that you can swim a lot faster than you are swimming at the moment, but just don't know how to do it?

Relax. Help is here!

## UNDERSTANDING TRANSITION POINTS

A transition point is a stage in your swimming career where your level of achievement is determined *not* by your age or height or talent...but by the decisions and choices you make in your training every day.

It's about thinking differently, about thinking different things and about making decisions and choices that will help you realize your swimming potential.

The **transition points in swimming** are called:

- Where and When
- What
- How
- Why

## WHERE AND WHEN SWIMMERS

The first transition point is actually becoming a swimmer. Your Mom and Dad are the ones who usually help you with this first transition point—from non-swimmer to swimmer. They find a pool "**where**" you can learn to swim and a swimming coach who has the skills, experience and passion to inspire you to learn.

This stage is simply about finding a place and a time in which you can discover and explore the wonderful world of water. However, it can be very important in the big picture.

It's important that these first steps in swimming are nurtured by a coach or a teacher or an instructor who is more than just a person with a nice swimming education certificate hanging on the wall.

Their job is to **light the fire**: to spark the flame that will burn inside you and inspire you to learn, improve, develop, train and race throughout your swimming career.

The "**where and when**" stage is based on the three E's:

- **EDUCATION.** Look for a coach, teacher or instructor who has been educated in the skills and techniques of swimming.
- **EXPERIENCE.** Find someone who knows and understands swimming and learning, and who has a proven track record of success in the sport.
- **EXCITEMENT.** Search for someone who has real passion and energy, and who is genuinely excited to be working with you and to be a swimming professional.

As they say, the journey of a thousand miles begins with the first step (or stroke).

## WHAT

From your first swimming lesson, you enter the next transition point in your swimming pathway: the “what” stage.

As a “what” swimmer, you commence the process of learning all the “whats” in swimming. You are introduced to the five competitive swimming strokes (butterfly, backstroke, breaststroke, freestyle and underwater), taught the basics of “walls” (dives, starts, turns and finishes) and educated through the fundamentals of fitness and training (speed, strength, endurance, power, flexibility, stability, mobility).

The “what” stage is where you learn all the basics—all the fundamentals of the sport of swimming that will become so important as you progress along the swimming pathway in the years to come.

Most swimmers never make it beyond the “what” transition point. Even senior swimmers competing at the national level can still be “what” swimmers in that their training and racing depends on their coach telling them “what” to do.

Away from the pool, “what” swimmers rely on Mom and Dad telling them “what” to eat, “what” to take to the pool, etc.

The key to making an effective transition from being a “what” swimmer to becoming a more advanced-level swimmer is in taking personal responsibility for every aspect of your training, preparation and recovery.

## HOW

“How” swimmers have learned to take the basic fundamental techniques and skills of swimming—the “whats”—and to apply them to racing situations. They learn to control their training and racing through the use of some of the more subtle “tools” of the trade: stroke counts, stroke rates, breathing patterns and accurate pacing.

“How” swimmers have started to “get” swimming. They have begun to understand what the sport is all about and have learned enough about themselves to know what works for them and what they need to do to swim at their best.

## WHY

“Why” swimmers have gone from simply listening, learning and repeating to understanding, knowing and taking personal responsibility for ensuring they achieve the best possible outcome from every workout.

They are the swimmers who coaches learn *from* because they are thinking things and doing things that few other swimmers can or do.

“Why” swimmers seek to understand. They embrace learning. They chase opportunities to challenge other swimmers and to be challenged so that they can learn faster.

They see workouts not as work, but as opportunities to improve. They consider every workout—every lap, every stroke—as moments that can help them get better.

They prepare to win by ensuring that their training experiences are more challenging, more demanding, tougher, harder and more difficult—in every way—than their goal meet could ever be.

They are RACERS: they live to compete, they thrive on competition, they exist to race and they enjoy the pain, pressure and fatigue that only racing can provide.

## EXAMPLES OF BEHAVIOR AT DIFFERENT STAGES OF A SWIMMER'S CAREER

TRANSITION POINT	PREPARATION FOR TRAINING	TRAINING	RACING
WHERE AND WHEN	None. Relies on others.	Attends training and completes the session as instructed.	Races for fun and enjoyment.
WHAT	None or limited.	Attends training and completes the session as instructed.	Follows coaches' instructions and executes a simple race plan based on swimming a learned pace.
HOW	Has accepted some responsibility for different aspects of preparation for training (e.g., packing own swim bag, snacking before training and having a full water bottle at training).	Attends training and focuses on technique, skills, accurate pacing, hydration and refueling.	Has learned to race intelligently by managing stroke count, stroke rate, breathing patterns and pace.
WHY	Has accepted some responsibility for different aspects of preparation for training (e.g., packing own swim bag, snacking before training and having a full water bottle at training).	Is totally committed to every element of training. Actively seeks feedback from the coach at every session. Is challenged and challenges teammates to strive for higher levels of achievement in all training activities. Seeks ways to improve skills, technique and racing abilities at every session. Is committed to dryland training as pool training.	Has developed a full complement of racing skills to match and overcome any competitive situation in a meet. Races to win by understanding what it takes to be a competitor and by having practiced “simulated” competitive environments in training every day.

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## THE FIVE KEY PRINCIPLES OF SWIMMING TRANSITION POINTS

1. **THE “INSANITY” PRINCIPLE.** There’s an old saying that goes, “*The definition of insanity is doing the same thing and expecting a different result.*” One of the reasons many swimmers never make it from one transition point to the next is they don’t change the way they think about their training and racing. Most swimmers get stuck in the “what” stage and never progress any further because they don’t make the mental jump from being “dependent” swimmers to “independent” swimmers who take responsibility for their own training, preparation and racing.
2. **THE “GET-THERE-BEFORE-YOU-GET-THERE” PRINCIPLE.** Another important principle in transition points is to get “there” *before* you actually get there. To be a national-level swimmer, you need to think like, train like and behave like you already are one. Many swimmers will swim at the level of the squad in which they currently train—and not at the level of the squad where they want to be.
3. **THE “IT’S-ALL-IN-MY-HEAD” PRINCIPLE.** There are no barriers to improving your swimming performance except those that you make yourself. Too many swimmers get stuck at one transition stage because they think, “I’ll never get there,” instead of thinking, “*When* I get there.”
4. **THE “IT-MUST-HAPPEN-RIGHT-NOW” PRINCIPLE** (also called the **PATIENCE PRINCIPLE**). There are no set rules about transition points in terms of the time it takes to progress from one point to the next. Some swimmers are “what” swimmers for a few months, and then they “get” it and become “how” swimmers. Others are “what” swimmers for years and years...and they may never “get” it.
5. **THE “IT’S-MY-TRANSITION” PRINCIPLE.** Many swimmers don’t progress to the next transition point because they have close friendships and connections with other swimmers in their current squad. Or maybe they’re training in a squad that uses a “one-size-fits-all” model for preparing swimmers, which assumes all swimmers must progress their swimming careers based on age, height or level of competition. ♦

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*Wayne Goldsmith is one of the world’s leading experts in elite-level swimming and high-performance sport. Be sure to check out his new website at [www.wgaquatics.com](http://www.wgaquatics.com).*



[PHOTO BY PETER H. BICK]

**PICTURED >** “WHY” SWIMMERS ARE RACERS, THEY LIVE TO COMPETE, THEY THRIVE ON COMPETITION, THEY EXIST TO RACE AND THEY ENJOY THE PAIN, PRESSURE AND FATIGUE THAT ONLY RACING CAN PROVIDE. ELIZABETH BEISEL (ABOVE) ACTIVELY SEEKS ADVICE FROM HER COACH, GREGG TROY, TO HELP BETTER PREPARE HERSELF FOR HER RACE.

## SUMMARY

1. Transition points are an important concept to understand in swimming.
2. Making a transition from one stage of swimming to the next has little to do with strength, speed, power, endurance, age, talent or ability. It’s about thinking differently and taking an increased responsibility for your training and racing.
3. The most important thing to remember is this: you can progress your swimming career as fast as you want by the decisions and the choices you make in and out of the water *every day*. The question is: “What do *you* choose?”

## WORLD

### DUEL IN THE POOL Glasgow, Scotland Dec. 20-21, 2013 (25 M)

w = World Record  
n = National Record

## WOMEN

<b>50 FREE</b>	<b>DEC. 21</b>	Francesca Halsall, EUR	23.93
		J. Ottesen-Gray, EUR	24.02
		Simone Manuel, USA	24.40
<b>100 FREE</b>	<b>DEC. 20</b>	Michelle Coleman, EUR	52.65
		Shannon Vreeland, USA	52.73
		Olivia Smoliga, USA	52.74
<b>200 FREE</b>	<b>DEC. 21</b>	Michelle Coleman, EUR	1:53.63
		Katie Ledecky, USA	1:53.83
		Melanie Costa, EUR	1:53.96
<b>400 FREE</b>	<b>DEC. 20</b>	Mireia Belmonte, EUR	3:57.65
		Melanie Costa, EUR	3:59.14
		Lotte Friis, DEN	4:00.19
<b>800 FREE</b>	<b>DEC. 21</b>	Mireia Belmonte, EUR	8:07.90
		Lotte Friis, EUR	8:10.40
		Jazmin Carlin, EUR	8:12.01
<b>100 BACK</b>	<b>DEC. 21</b>	Olivia Smoliga, USA	57.06
		Simona Baumtova, EUR	57.11
		Daryna Zevina, EUR	57.16
<b>200 BACK</b>	<b>DEC. 20</b>	Daryna Zevina, EUR	2:01.62
		Simona Baumtova, EUR	2:04.06
		Kathleen Baker, USA	2:05.08
<b>100 BREAST</b>	<b>DEC. 21</b>	Jessica Hardy, USA	1:04.65
		Micah Lawrence, USA	1:05.27
		Sophie Allen, EUR	1:05.39
<b>200 BREAST</b>	<b>DEC. 20</b>	Micah Lawrence, USA	2:19.15
		Breeja Larson, USA	2:22.20
		Sophie Allen, EUR	2:23.36
<b>100 FLY</b>	<b>DEC. 20</b>	J. Ottesen-Gray, EUR	56.78
		Claire Donahue, USA	56.83
		Kendyl Stewart, USA	57.63
<b>200 FLY</b>	<b>DEC. 21</b>	Mireia Belmonte, EUR	2:03.31
		Cammille Adams, USA	2:04.61
		Franziska Henke, EUR	2:05.83
<b>200 IM</b>	<b>DEC. 21</b>	Sophie Allen, EUR	2:05.90
		Caitlin Leverenz, USA	2:06.77
		Hannah Milej, EUR	2:08.55
<b>400 IM</b>	<b>DEC. 20</b>	Mireia Belmonte, EUR	4:24.58
		Aimee Willmott, EUR	4:26.80
		Caitlin Leverenz, USA	4:28.45
<b>400 MR</b>	<b>DEC. 20</b>	Europe	3:49.14
		USA	3:51.38
<b>400 FR</b>	<b>DEC. 21</b>	Europe	3:27.70
		USA	3:28.96

## MEN

<b>50 FREE</b>	<b>DEC. 21</b>	Jimmy Feigen, USA	21.20
		Anthony Ervin, USA	21.27
		Cullen Jones, USA	21.27
<b>100 FREE</b>	<b>DEC. 20</b>	Yannick Agnel, EUR	47.13
		Adam Brown, EUR	47.24
		Anthony Ervin, USA	47.36
<b>200 FREE</b>	<b>DEC. 21</b>	Conor Dwyer, USA	1:41.68
		Tyler Clary, USA	1:43.84
		Robbie Renwick, EUR	1:44.44
<b>400 FREE</b>	<b>DEC. 20</b>	Michael Klueh, USA	3:39.94
		Yannick Agnel, EUR	3:40.19

3:40.24	Conor Dwyer, USA	1:55.88	Katie Ledecky, NCAP	6:53.95	Nova of Virginia	3:44.80	Chico
<b>800 FREE</b>	<b>DEC. 21</b>	2:01.04	Madison Boswell, PSDN				
7:33.99n	Michael McBroom, USA	<b>200 IM</b>	Allie Szekeley, CBST				
7:39.69	Pal Joensen, EUR	2:00.34	Reni Moshos, NCAP				
7:41.96	Michael Klueh, USA	2:01.72	Claire DeSeim, NCAC				
<b>100 BACK</b>	<b>DEC. 21</b>	2:04.23	<b>DEC. 13</b>				
50.08	Eugene Godsoe, USA	4:20.83	Allie Szekeley, CBST				
50.18	Tom Shields, USA	4:13.14	Reni Moshos, NCAP				
50.55	C. Walker-Hebborn, EUR	4:17.08	Madison Boswell, PSDN				
<b>200 BACK</b>	<b>DEC. 20</b>	4:20.83	<b>DEC. 14</b>				
1:52.14	Eugene Godsoe, USA	<b>200 MR</b>	Suburban				
1:52.27	Tyler Clary, USA	1:44.47	Nation's Capital				
1:53.41	Yannick Leberherz, EUR	1:45.07	Nation's Capital B				
<b>100 BREAST</b>	<b>DEC. 21</b>	1:45.64	<b>DEC. 14</b>				
56.88n	Kevin Cordes, USA	<b>400 MR</b>	Nation's Capital				
57.05	Marco Koch, EUR	3:40.80	Suburban				
57.08	Damir Dugonjic, EUR	3:50.44	Central Bucks				
<b>200 BREAST</b>	<b>DEC. 20</b>	3:51.60	<b>DEC. 14</b>				
2:01.83	Michael Jamieson, EUR	<b>200 FR</b>	Nation's Capital				
2:01.90	Marco Koch, EUR	1:34.63	Central Bucks				
2:02.38n	Kevin Cordes, USA	1:34.83	Suburban				
<b>100 FLY</b>	<b>DEC. 20</b>	1:35.70	<b>DEC. 15</b>				
49.80	Tom Shields, USA	<b>400 FR</b>	Central Bucks				
51.67	Ivan Lindjer, EUR	3:26.93	Machine				
51.68	V. Stjepanovic, EUR	3:28.39	Poseidon				
<b>200 FLY</b>	<b>DEC. 21</b>	3:29.83	<b>DEC. 13</b>				
1:50.81n	Tom Shields, USA	<b>800 FR</b>	Nation's Capital				
1:52.06	V. Stjepanovic, EUR	7:27.55	Machine				
1:52.87	Roberto Pavoni, EUR	7:31.64	Central Bucks				
<b>200 IM</b>	<b>DEC. 21</b>	7:31.65	<b>MEN</b>				
1:53.51	Conor Dwyer, USA	<b>50 FREE</b>	<b>DEC. 14</b>				
1:54.20	Roberto Pavoni, EUR	20.48	James Jones, NCAP				
1:54.26	Chase Kalisz, USA	20.81	Grayson Smith, MACH				
<b>400 IM</b>	<b>DEC. 20</b>	21.01	Greg Brocato, CBST				
4:01.76	Conor Dwyer, USA	<b>100 FREE</b>	<b>DEC. 15</b>				
4:02.40	Chase Kalisz, USA	44.80	James Jones, NCAP				
4:03.04	David Verraszto, EUR	44.95	USA				
<b>400 MR</b>	<b>DEC. 20</b>	45.51	Europe				
3:23.24	USA	<b>200 FREE</b>	<b>DEC. 13</b>				
3:25.42	USA	1:37.97	James Murphy, MACH				
<b>400 FR</b>	<b>DEC. 21</b>	1:38.01	Adrian Lin, NCAP				
3:06.66	USA	1:39.61	Grant Goddard, NCAP				
3:07.95	Europe	<b>500 FREE</b>	<b>DEC. 14</b>				
		4:25.24	James Murphy, MACH				
		4:27.54	Brian Tsau, NCAP				
		4:29.73	Adrian Lin, NCAP				
		<b>1000 FREE</b>	<b>DEC. 15</b>				
		9:13.91	Brian Tsau, NCAP				
		9:19.27	A. Drummond, PSDN				
		9:22.78	Gavin Springer, NCAP				
		<b>1650 FREE</b>	<b>DEC. 12</b>				
		15:32.71	O. Van Krimpen, NCAP				
		15:32.90	Brian Tsau, NCAP				
		15:40.31	A. Drummond, PSDN				
		<b>100 BACK</b>	<b>DEC. 14</b>				
		49.62	Grayson Smith, MACH				
		50.20	James Murphy, MACH				
		50.27	John Montes, CPAC				
		<b>200 BACK</b>	<b>DEC. 15</b>				
		1:48.61	Grant Goddard, NCAP				
		1:49.37	John Montes, CPAC				
		1:50.70	James Murphy, MACH				
		<b>100 BREAST</b>	<b>DEC. 13</b>				
		55.80	Michael McBryan, CBST				
		56.03	Grayson Smith, MACH				
		56.59	Reid Penzler, NCAP				
		<b>200 BREAST</b>	<b>DEC. 14</b>				
		1:59.01	Carsten Vissering, NCAP				
		2:01.55	Michael McBryan, CBST				
		2:04.61	Arthur Wang, DST				
		<b>100 FLY</b>	<b>DEC. 13</b>				
		48.21	James Crabb, NCAP				
		48.65	Grant Goddard, NCAP				
		49.55	Greg Brocato, CBST				
		<b>200 FLY</b>	<b>DEC. 14</b>				
		1:46.23	James Crabb, NCAP				
		1:49.05	James Murphy, MACH				
		1:49.38	Cole McGarry, NCAP				
		<b>200 IM</b>	<b>DEC. 15</b>				
		1:51.32	C. Zamparelli, PSDN				
		1:52.82	James Cobb, NCAP				
		1:52.91	Grayson Smith, MACH				
		<b>400 IM</b>	<b>DEC. 13</b>				
		3:57.87	C. Zamparelli, PSDN				
		3:59.13	Gregory Song, NCAP				
		3:59.92	James Crabb, NCAP				
		<b>200 MR</b>	<b>DEC. 15</b>				
		1:31.47	Nation's Capital				
		1:33.01	Nation's Capital B				
		1:33.22	Machine				
		<b>400 MR</b>	<b>DEC. 14</b>				
		3:20.60	Nation's Capital				
		3:23.77	Central Bucks				
		3:24.01	Machine				
		<b>200 FR</b>	<b>DEC. 14</b>				
		1:23.68	Nation's Capital				
		1:24.61	Nation's Capital B				
		1:25.69	Nova of Virginia				
		<b>400 FR</b>	<b>DEC. 15</b>				
		3:07.91	Machine				
		3:11.83	North Carolina				
		3:13.22	Nova of Virginia				
		<b>800 FR</b>	<b>DEC. 13</b>				
		6:36.75	Nation's Capital				
		6:50.36	Nation's Capital B				

## MIXED (Tiebreaker to determine meet champion)

<b>200 MR</b>	<b>DEC. 21</b>	USA	1:37.17w
<b>400 MR</b>	<b>DEC. 20</b>	USA	3:23.24
<b>100 FLY</b>	<b>DEC. 21</b>	Europe	3:25.42
<b>400 FR</b>	<b>DEC. 21</b>	USA	3:06.66
<b>200 BREAST</b>	<b>DEC. 20</b>	Europe	3:07.95

## NATIONAL

### SPEEDO TOM DOLAN INVITATIONAL College Park, Maryland Dec. 12-15, 2013 (25 YD)

## WOMEN

<b>50 FREE</b>	<b>DEC. 14</b>	Janet Hu, NCAP	21.94
		Morgan Hill, MACH	22.89
		Emily Kosten, CBST	23.00
<b>100 FREE</b>	<b>DEC. 15</b>	Janet Hu, NCAP	48.25
		Morgan Hill, MACH	49.88
		Emily Kosten, CBST	50.14
<b>200 FREE</b>	<b>DEC. 13</b>	Sydney Pesetti, PSDN	1:48.53
		Marina Falcone, NCAP	1:49.16
		Robyn Dryer, NCAP	1:49.20
<b>500 FREE</b>	<b>DEC. 14</b>	Abigail Richey, NOVA	4:50.36
		Robyn Dryer, NCAP	4:50.41
		Amber Glenn, PVA	4:54.82
<b>1000 FREE</b>	<b>DEC. 15</b>	M. Homovich, NCAC	9:45.39
		Megan Byrnes, NCAP	9:50.74
		Robyn Dryer, NCAP	10:00.00
<b>1650 FREE</b>	<b>DEC. 12</b>	Amber Glenn, PVA	16:41.02
		Sinead Eksteen, NCAP	16:48.84
		Bailey Hall, NOVA	17:02.78
<b>100 BACK</b>	<b>DEC. 14</b>	Annie Boone, NCAP	53.85
		Kristina Li, NCAP	54.37
		Allie Szekeley, CBST	54.65
<b>200 BACK</b>	<b>DEC. 15</b>	Allie Szekeley, CBST	1:54.37
		Annie Boone, NCAP	1:58.51
		Megan Byrnes, NCAP	1:59.07
<b>100 BREAST</b>	<b>DEC. 13</b>	Schuyler Bailar, NCAP	1:03.05
		Allie Szekeley, CBST	1:03.48
		Janet Hu, NCAP	1:03.49
<b>200 BREAST</b>	<b>DEC. 14</b>	Allie Szekeley, CBST	2:12.81
		Schuyler Bailar, NCAP	2:17.83
		Katie Fernander, PRA	2:18.02
<b>100 FLY</b>	<b>DEC. 13</b>	Janet Hu, NCAP	52.05
		Leah Rogers, NCAP	54.97
		Andi Mack, NCAP	55.45
<b>200 FLY</b>	<b>DEC. 14</b>	Janet Hu, NCAP	1:54.37



**NCAA DIVISION I**

**WOMEN (as of Jan. 17)**

1. California
2. Texas A&M
3. Georgia
4. Stanford
5. Southern California
6. Texas
7. North Carolina
8. Florida
9. Virginia
10. Arizona
11. Indiana
12. Auburn
13. Minnesota
14. Louisville
15. Tennessee
16. UCLA
17. Penn State
18. Purdue
19. Ohio State
20. Florida State
21. Michigan
22. Alabama
23. Arkansas
24. Notre Dame
25. Utah

**MEN (as of Dec. 11)**

1. Michigan
2. Texas
3. (tie) California
3. (tie) Florida
5. Arizona
6. Southern California
7. Missouri
8. Louisville
9. Auburn
10. Georgia
11. Ohio State
12. Stanford
13. Minnesota
14. North Carolina
15. Virginia Tech
16. (tie) Florida State
16. (tie) Indiana
18. Virginia
19. Penn State
20. Notre Dame
21. Iowa
22. Utah
23. UNLV
24. Harvard
25. (tie) South Carolina
25. (tie) Princeton

**Also receiving votes:** North Carolina State, Purdue, Wisconsin, Texas A&M

**NCAA DIVISION II**

**WOMEN (as of Dec. 19)**

1. Drury University
2. Queens University (Charlotte)
3. Wingate University
4. (tie) Delta State University
4. (tie) Florida Southern College
6. (tie) UC San Diego
6. (tie) Simon Fraser University
8. West Chester University
9. Grand Valley State University
10. Lindenwood University
11. Long Island University - Post
12. University of Alaska - Fairbanks
13. University of Tampa
14. California Baptist University
15. (tie) Nova Southeastern University
15. (tie) Northern Michigan University
17. Wayne State University
18. University of West Florida
19. Ashland University
20. St. Cloud State University
21. (tie) Edinboro University
21. (tie) Truman State University
23. University of Indianapolis
24. University of Bridgeport
25. Gannon University

**Also receiving votes:** Limestone College, Indiana University of Pennsylvania, Bloomsburg Univ., Cal State East Bay, Hillsdale College, Univ. of Findlay

**MEN (as of Dec. 19)**

1. Drury University
2. (tie) Grand Valley State University
2. (tie) Queens University (Charlotte)
4. Florida Southern College
5. Wingate University
6. University of Tampa
7. Lindenwood University
8. UC San Diego
9. West Chester University
10. (tie) St. Cloud State University
10. (tie) University of Bridgeport
12. University of Indianapolis
13. Missouri S&T
14. Nova Southeastern University
15. Delta State University
16. Fairmont State University
17. California Baptist University
18. Wayne State University
19. Limestone College
20. Ashland University
21. Saint Leo University
22. Lewis University
23. Malone University
24. Simon Fraser University
25. Lake Erie College

**Also receiving votes:** Colorado School of Mines, Henderson State Univ., Ouachita Baptist Univ., Gannon Univ., Florida Tech, Colorado Mesa Univ., Bloomsburg University, Pfeiffer University

**NCAA DIVISION III**

**WOMEN (as of Dec. 13)**

1. Emory University
2. Denison University
3. Kenyon College
4. Johns Hopkins University
5. Williams College
6. Washington University (MO)
7. NYU
8. MIT
9. Stevens Inst. of Technology
10. University of Chicago
11. Gustavus Adolphus College
12. Wheaton College (IL)
13. Carnegie Mellon University
14. Springfield College
15. DePauw University
16. Amherst College
17. Univ. of Wisconsin - La Crosse
18. Claremont-Mudd-Scripps
19. Grove City College
20. University of Rochester

**Also receiving votes:** Keene State College, Calvin College, Wellesley College

**MEN (as of Dec. 13)**

1. Denison University
2. Kenyon College
3. Emory University
4. Johns Hopkins University
5. MIT
6. Williams College
7. Stevens Inst. of Technology
8. The College of New Jersey
9. NYU
10. St. Olaf College
11. DePauw University
12. (tie) Carnegie Mellon University
12. (tie) University of Chicago
14. Washington University (MO)
15. Amherst College
16. Connecticut College
17. Keene State College
18. Gettysburg College
19. Claremont-Mudd-Scripps
20. Calvin College

**Also receiving votes:** Albion College, Rowan Univ., Univ. of Rochester, University of Mary Washington

**NAIA**

**WOMEN (as of Dec. 12)**

1. Cumberlands (Ky.)
2. Oklahoma Baptist
3. SCAD Savannah (Ga.)
4. Brenau (Ga.)
5. (tie) Olivet Nazarene (Ill.)
5. (tie) Biola (Calif.)

**Also receiving votes:** Union (Ky.)

**MEN (as of Dec. 12)**

1. (tie) Oklahoma Baptist
1. (tie) St. Andrews (N.C.)
3. SCAD Savannah (Ga.)
4. Cumberlands (Ky.)
5. Concordia (Calif.)

**Also receiving votes:** Olivet Nazarene (Ill.) ♦

# PARTRING SHOT

[PHOTO BY DENISE HARMAN]



PICTURED > SWIMMERS  
WARM UP DURING THE COOL  
MORNING HOURS FOR THE  
2013 ARIZONA SHORT COURSE  
AGE GROUP CHAMPIONSHIPS  
AT THE PHOENIX SWIM CLUB.