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A swimmer wearing a black Adidas swim cap and goggles is captured in a freestyle stroke, moving from left to right across the top of the frame. The water is splashing around their head and arms. Below the waterline, the swimmer's legs are visible, wearing dark, ribbed swim fins. The background shows a swimming pool with lane lines.

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by Michael J. Stott

Summer league is just as much about friends, fun and personalities as it is about swimming and competition.



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ON THE COVER

Caeleb Dressel of Clay High School (Green Cove Springs, Fla.) is *Swimming World's* Male High School Swimmer of the Year. He led the country in the 50 and 200 yard freestyles, and also set the overall national high school record in the 50 and national public school record in the 100 fly. After the high school season, swimming for his club team, the Bolles Sharks, he became the first 18-and-under swimmer to break 19 seconds in the 50 yard free. (See story, page 22).

[PHOTO BY PETER H. BICK]

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Katie Ledecky not only is *Swimming World Magazine's* Female High School Swimmer of the Year—and among the best women's distance freestylers of all time—but she's also “a great kid who truly cares about her community.”

SWIMMING WORLD MAGAZINE (ISSN 0039-7431). Note: permission to reprint articles or excerpts from contents is prohibited without permission from the publisher. The publisher is not responsible for errors in advertisements. Microfilm copies: available from University Microfilms, 313 N. First St., Ann Arbor, MI 48103. *Swimming World Magazine* is listed in the Physical Education Index. Printed in the U.S.A. © Sports Publications International, August 2014.

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What Is the Cost for a Drug Free Sport?

BY BRENT T. RUTEMILLER

Inspired by Chuck Warner's "Triumph and Tragedies" series in which he tells the story of how the Atlanta Games were saved (see pages 33-36), I wanted to pick up where Mr. Warner left off...

Finding new testing methods that keep pace with the test-avoiding methods used by athletes should always be the No. 1 goal of the World Anti-Doping Agency (WADA) and the United States Anti-Doping Agency (USADA). Period!

Yet, obstacles to reach that goal still abound. Some are self-inflicted; others are self-serving.

The first obstacle is exposing the weakness in the current testing system. The second obstacle is convincing WADA and USADA to use new technology that may be more efficient and cost-effective.

SELF-INFLICTED

One weakness in the current testing system is obvious. There is a high cost associated with each test. Therefore, the tests are limited to elite-level athletes.

According to the "2013 Anti-Doping Testing Figures," 8,616 urine samples were taken from swimmers in all of 2013 (4,264 were taken during competition, and 4,091 were taken out of competition). Many of these tests were of the same athlete. Only .008 were abnormal. On the surface, this appears great for the sport and the governing bodies. But are we really catching all the cheaters?

Athletes today have more resources and more advanced technology than the technology that is currently being used by WADA and USADA. The anti-doping agencies need to improve their game.

According to information received by *Swimming World*, Dr. Libardoni—a leading expert on a perfected form of testing using high-throughput screening (HTS)—presented his findings and research to the main scientific group at WADA on a more efficient system for screening thousands upon thousands of athletes in a more cost-effective manner. The system he presented is the most advanced and cost-effective system available today.

The "new" system has been on the market for eight years. It has the ability to quickly isolate various markers found in an athlete's urine. There is even a "breath

analyzer" that is in the early stages of being developed.

The use of high-throughput screening procedures would allow for mass testing—including caffeine—for just pennies on the dollar (estimated to be 22 cents vs. \$90 per current testing procedures). Implementing high-throughput screening procedures as a pretest to existing procedures would be good for the sport.

With an inexpensive screening procedure that can be administered to the masses, our sport will easily be able to detect early abnormalities that could then be followed up with more rigorous testing procedures.

Not wanting to admit that there is a weakness in their current system and, perhaps, a better system on the market than what is currently being used, WADA refused to take any further action and dismissed the research findings presented by Dr. Libardoni. However, WADA is funding similar research. But why?

SELF-SERVING

Exposing the weakness in the current drug testing system has been a constant battle led by John Leonard, executive director of the American Swim Coaches Association, and George Block, president of the World Swim Coaches Association. Why WADA was so quick to dismiss new technology presented by Dr. Libardoni requires more questioning. More media exposure and, perhaps, some investigative journalism as to whom WADA is serving needs to be brought to the public's attention. The following questions need to be asked:

- What costs are associated with the use of the current system in terms of contracts, labs and equipment?
- What personnel, employees or contractors have a vested interest in the current system?
- Why can't there be a two-tiered system—one that screens and another that tests?

Over the next few months, *Swimming World* will investigate further into these areas. ❖

Brent T. Rutemiller
Publisher of *Swimming World Magazine*



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BREATHING ON THE FLY

PICTURED > DYLAN BOSCH



BY JEFF COMMINGS

PHOTOS BY PETER H. BICK

Before Michael Phelps came into international prominence, coaches never advised their swimmers to breathe every stroke in butterfly. “The Greatest Olympian of All Time” has spawned a generation of every-stroke breathers, but is that always the best way to swim a butterfly race?

The breathing patterns used in butterfly races often depend not only on the length of the race, but whether the pool is short course or long course. *Swimming World Magazine* asked two elite butterfly champions to weigh in on their personal preferences as far as breathing on butterfly is concerned:

DYLAN BOSCH

2014 NCAA champion, U.S. Open/NCAA record holder, 200 yard butterfly

My NCAA (short course yards) strategy versus my long course strategy is slightly different. At NAAs, the underwater game is very important, and the number of turns forces you to have a lot of oxygen. During short course meets, I breathe every stroke to maximize my oxygen intake in order to have a lot of energy and oxygen for the turns.

For long course meters, it’s a little different. I still breathe every stroke—again to maintain maximum oxygen intake—but I throw in a (non-breath-

ing stroke) every now and then. It’s not a very rigid breathing pattern. Also, not taking a breath out of the turn is important, even though it’s difficult sometimes!

FELICIA LEE

2014 NCAA champion, 100 yard butterfly

For breathing patterns in butterfly, I tend to focus on different aspects in short course versus long course. In short course, it’s more about the number of breaths per lap. I spend most of the race underwater, and because of that, I want to make sure I have enough oxygen in my system so I can keep accelerating at the end of the 100 fly.

For long course, it’s definitely a specific pattern. After playing around with different breathing patterns, (Stanford head coach) Greg Meehan and I have found that “2 up/1 down” is the most efficient for my stroke. Of course, everyone is different, so this doesn’t apply to everyone.

During practice, I focus on breathing early in my stroke so that my hands and head are not out at the same time. I also focus on the head lift, making sure that it’s not too high, especially when my stroke starts breaking down. ❖



PICTURED > FELICIA LEE

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FROM FUN TO FAST



SUMMER LEAGUE IS JUST AS MUCH ABOUT FRIENDS, FUN AND PERSONALITIES AS IT IS ABOUT SWIMMING AND COMPETITION.

BY MICHAEL J. STOTT

[PHOTO BY ANDREA NIGH]

Triple gold medalist Debbie Meyer was not the first Olympian—nor will she be the last—to get her aquatic start in summer league.

“I swam Memorial Day to Labor Day for Wedgewood Swim Club in Haddonfield, N.J., and summer league got me hooked,” she says.

Franke Marsden is coordinator for the 108-team, 17,000-swimmer Atlanta Swim Association. It seems that every year the team that wins the Georgia high school state championship comes from an ASA community “because the backbone of the sport is all in summer league,” he says. “It is where kids get indoctrinated into—and find their love of—the sport. The reason kids get involved and engaged is because the coaches do an exceptional job of making it enjoyable.”

The incoming boys head coach at St. Paul’s School in Brooklandville,

Md., is Bridger Bell, who has a unique perspective on swimming. His father (Keith) is a sport psychologist. His mother (Sandy Neilson-Bell) won three gold medals at Munich in 1972. As a coach since age 14, Bridger believes excellence has no limits.

“Whatever a swimmer’s goal—fitness, recreation, camaraderie, self-improvement, winning—that goal will be best chased by a swimmer who pursues excellence,” he says. “I learned this by coaching Masters with my parents. It was incredible to see adults of all ages getting fit, having fun and kicking butt in shorter time than they ever expected.

“It is important to recognize that there is no defined or pre-determined potential in an athlete. I tell my swimmers not to ‘try your best’ or ‘do your best,’ because thinking of ‘your best’ is to conceive of a limit for yourself.

“You don’t have a ‘best’: you have

infinite potential. I invite all my swimmers to be open to surprising themselves, to doing things shockingly great. This is why my swimmers set three goals for each event: a ‘pleased-with’ goal, an ‘excited-about’ goal and a ‘thrilled-with’/‘mind-blowing’ goal, so that we’re all focused on making regular improvements.”

IT’S ALL ABOUT HAVING FUN

Regardless of age, the universal engagement point appears to be *fun*.

Miriam Scholz started her summer league career when she was 5. She now wins league titles as the coach of that same City of Alpharetta 280-member team. She earned ASA Coach of the Year honors in 2010 and 2013.

Scholz’ first priority in engaging swimmers is “to make it FUN from Day One.”

The wide range of abilities within

the program is a challenge. “That’s why my goal for the first week is simply to get kids to feel comfortable with their teammates, their coaches and enjoy the sport.”

She does that by offering a variety of sets and giving swimmers a chance to demonstrate their abilities while gaining aquatic confidence.

To help make swimmers faster, Scholz designates stroke lanes and allows them to switch in order to work with specific coaches as needed. She also has a reward system for those who show improvement. “This really motivates the kids to drop time and work hard at practice,” she says.

ASA rival Tim Storsteen at Brookwood Hills (322 swimmers, six assistants, six junior assistants) has coached his team to four league titles and is in lockstep with Scholz.

“I make it as fun as possible when kids first walk on the pool deck or get in the water. For all 6-and-unders who have never been on a team, we create a safe environment in the shallow end, teaching them the basics of floating, breathing, kicking and arm strokes before we transition to the deep end.

“We also divide kids by age and ability groups. We work to get each child to swim his best and keep the competition level very low. However, when we go up against another team, it is another story,” he says.

“At our practice sessions, you will see every coach teaching *technique, technique, technique*. Any person can tell a kid to swim some laps, but a good coach will teach the swimmer proper technique from the very beginning. I once heard that ‘swimming is 85 percent technique, 15 percent training,’ and that has worked for me for a number of years,” says Storsteen.

SOME NEED EXTRA MOTIVATION

Not all kids take to the water naturally. Some need extra motivation. Jonathan Alford coached for years at the James River Aquatic Club in Rich-

mond, Va. He is now vice president of swimming for the Seattle-area Midlakes Swim League, and he observes that motivation and desire manifest itself in many ways.

“What I found most helpful—and enjoyed,” he says, “was constantly watching for clues, some specific to swimming, some reflective of varying personality traits. Some kids are innately hard workers no matter their skill level; others respond when presented with goals or by achieving success through winning a ribbon, improving a time or simply receiving praise. Some are just competitive with their peers, and swimming happens to be the platform at the time. Motivation is not hard to find if you make a point of engaging each kid,” he says.

In practice, Alford noticed “that one size didn’t fit all. I was open to many avenues and loved catching kids in the act of doing something good, such as finishing a practice set strongly, improving a stroke technique, mastering a flip turn, being a good teammate.

“Some kids are naturally competitive and just need guidance on how to channel it. Others respond to a little personal attention; some take more work to feel they’re valued and perform. Positive reinforcement wins the day with weaker swimmers; negative reinforcement does not.

“Kids are there to have fun, be with friends, be part of the team and have an adult, who is not their parent, appreciate them. Deliver that experience to them, set them up for success, and chances are they’ll respond by working harder, improving and scoring points,” he says.

“Summer swimming is for everyone,” says Alford, “and you never know what child may blossom. A key, however, is understanding the structure of the league and setting kids up for success. If the league’s scoring and placement system is heavily weighted toward the fastest swimmers, weaker swimmers need to be

set up for other opportunities to feel like they’re contributing. If the league is structured to give weight to multiple levels of swimmers, those ‘soft swimmers’ are just as important to winning meets—and can be a key competitive advantage,” he says.

Storsteen believes there is always a spot for someone on a team, and he works hard to find opportunities for weaker swimmers, especially in relays.

“It is all about the experience,” he says. “Brookwood Hills is a special place when you have 400 people cheering for one swimmer to get across the pool for the first time. Then everyone is a part of that special moment.”

TEAM DYNAMICS PLAY A ROLE

As in many sports, team dynamics often assume a persona of their own.

“As long as my slower swimmers are having fun and working at practice, all is good,” says Scholz. “With an incredibly large team, it is important for us to feel unity. This helps swimmers want to do well for the team, and if swimmers feel like they are part of that, then they will be engaged at practice and meets,” she says.

Alford sees the swimmer/coach relationship as symbiotic: “Summer league is just as much about friends, fun and personalities as it is about swimming and competition. Whatever role a swimmer may assume benefits the team and coach by creating a good balanced environment for everyone.

“Celebrating the success of any child as part of the team can also help instill values and confidence as they grow in life—a mission greater than performance in any one race.” ❖

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

THE CATCH PHASE

BY ROD HAVRILUK

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

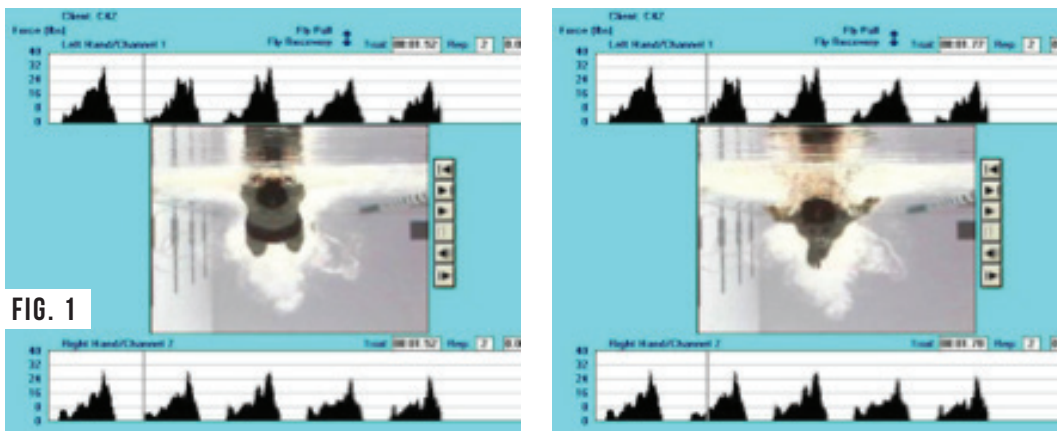


FIG. 1

FIG. 1 > (LEFT) This swimmer wastes about one-quarter of a second during his butterfly catch “phase.” Because his arms have poor leverage during this time, he only generates a minimal amount of hand force. (The vertical gray lines on the force curves are synchronized with the video image.)

SWIMMING TECHNIQUE MISCONCEPTION:

A common swimming technique misconception is that the catch is a “phase” of the stroke cycle. While the “catch” is a universally recognized feature of the stroke cycle, how it is explained and taught varies considerably. Many sources define the catch as a “phase” (e.g., Ian McLeod, 2010), but a more appropriate definition is a “transition point.” This is the point at which the hand changes direction from forward to backward. The distinction between “phase” and “transition point” is important, as it can significantly impact performance.

THE CATCH DEFINED AS A “PHASE”

The problem with defining the catch as a “phase” is that it implies a duration of time. Typically, the hand moves sideways (away from the body centerline) during a swimmer’s attempt to have a catch phase. The result is usually 1-tenth to 3-tenths of a second of wasted time, with the arm in a position with poor leverage, generating minimal force. No swimmer can afford to have a substantial proportion of the stroke cycle that is non-productive.

For example, the swimmer in **Fig. 1 (above)** moves his hands sideways as he begins the underwater arm motion. Very little hand force is generated for one-quarter of a second during this catch “phase.” It is common for swimmers to make a similar arm motion in all four strokes, where the hand initially moves sideways into a weaker position (with poorer leverage).

NEGATIVE IMPACT OF CATCH “PHASE” DESCRIPTIONS

Words that are used to describe a catch “phase” often encourage swimmers to waste time with the arm in a weak position. “Soft” and “strong” are two common adjectives used to describe a catch phase. Obviously, these descriptors are qualitative and subject to interpretation, and, unfortunately, are likely to make a non-productive arm motion last longer and limit performance.

For example, a “soft” catch phase is performed after the arm entry by moving the hand downward with very little force (Marc Evans, 2014). Doing this, however, guarantees that the hand will move slowly and waste time with the arm in a position with poor leverage.

Other sources recommend a “strong” catch phase. This will probably also waste time and effort. Leverage at the completion of the arm en-

try is poor, so a swimmer must exert considerable muscular effort to apply even minimal force on the water. A swimmer's perception of a "strong" catch phase may actually indicate that he/she has maintained the arm in a position with poor leverage (to feel "strong") for too long.

THE CATCH DEFINED AS A "TRANSITION POINT"

When the arm completes an effective entry (or the recovery in breaststroke), the hand is positioned at the catch "transition point," as shown in **Fig. 2 (top right, left panel)**. If the catch is defined as the "point" where the hand changes direction from forward to backward, there will be more of a tendency to move the hand initially backward instead of sideways. This will, in turn, minimize wasted motion.

The same definition for the catch (as a "transition point") is applicable to all four competitive strokes. This can help to simplify the concept for swimmers.

Once the arm is positioned at the catch "transition point," the arm is immediately in position to begin the pull by flexing the elbow. Research shows that elbow flexion is critical to increasing force (e.g., Ted Becker and Rod Havriluk, 2010). Force, in turn, is essential because it is directly related to swimming speed.

Instructions for beginning the pull phase for all four strokes can include "flex the elbow," as shown in **Fig. 2 (top right, right panel)**. The butterfly

swimmer in **Fig. 3 (bottom, left image)** has completed her arm entry and is about to begin her pull. Her hands have stopped moving forward and are about to start moving backward. At this instant, her hands are at the catch "transition point." She immediately begins her pull with elbow flexion, and her hand force increases substantially in about 2-tenths of a second (**Fig. 3, bottom, right image**).

An added benefit of eliminating the wasted time of a catch "phase" is related to injury. When the arm is in front of the body at the beginning of the stroke, the shoulder is exposed to maximum stress. If the hand begins moving back immediately after entry, the exposure time is reduced, as is the potential for injury. (The impact of "exposure time" is explained in more detail in Becker & Havriluk, 2014).

SUMMARY

The catch is often referred to as a "phase" of the stroke cycle, implying that it requires a duration of time. If a swimmer makes the catch last for even a brief amount of time, that time will be wasted and the arm will be in a weak position that stresses the shoulder. The catch must instead be considered a "transition point" between the completion of the arm entry and the beginning of the pull. A swimmer focused on a transition point rather than a phase will be more likely to improve the leverage of the arm, generate more force and reduce shoulder stress. ❖

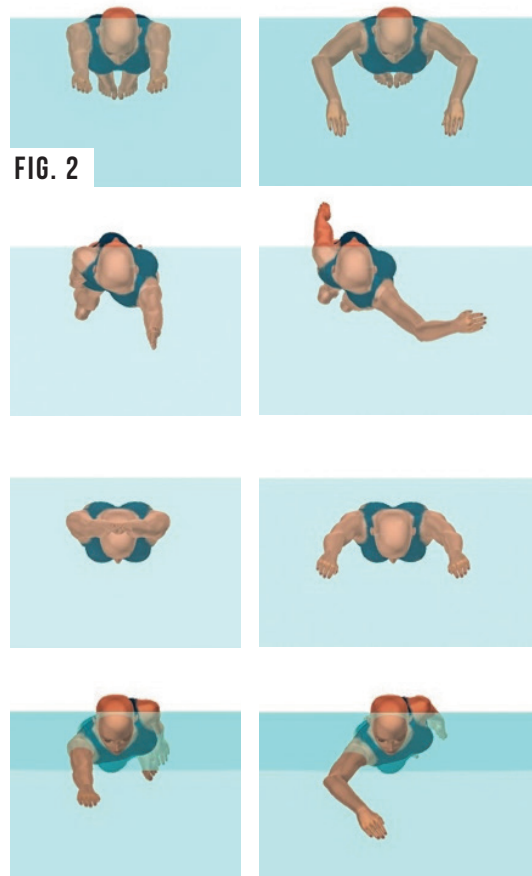


FIG. 2

FIG. 2 > (ABOVE) These images show the catch as the "transition point" between the completion of the arm entry (arm recovery for breaststroke) and the beginning of the pull (left panel). The pull begins by immediately flexing the elbow (right panel).

Dr. Rod Havriluk is a sports scientist and consultant who specializes in swimming technique instruction and analysis. His strategies provide rapid improvement while avoiding injury. He can be reached at the website for Swimming Technology Research (Tallahassee, Fla.): www.SwimmingTechnology.com.

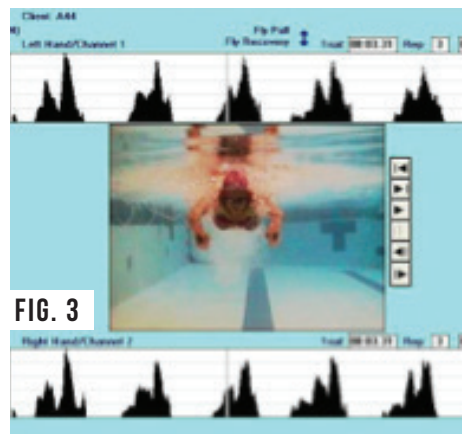
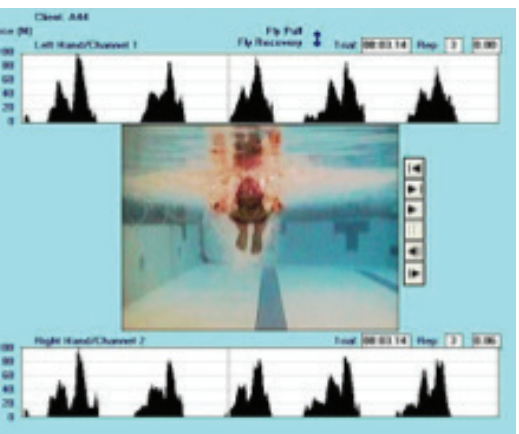


FIG. 3

FIG. 3 > (LEFT) This swimmer has completed her butterfly arm entry in the left image (at the catch transition point). She immediately flexes her elbows to begin her pull and has a substantial increase in hand force (right image).

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Once the arm is positioned at the catch "transition point," the arm is immediately in position to begin the pull by flexing the elbow. Research shows that elbow flexion is critical to increasing force (e.g., Ted Becker and Rod Havriluk, 2010). Force, in turn, is essential because it is directly related to swimming speed.

Instructions for beginning the pull phase for all four strokes can include "flex the elbow," as shown in **Fig. 2 (top right, right panel)**. The butterfly

swimmer in **Fig. 3 (bottom, left image)** has completed her arm entry and is about to begin her pull. Her hands have stopped moving forward and are about to start moving backward. At this instant, her hands are at the catch "transition point." She immediately begins her pull with elbow flexion, and her hand force increases substantially in about 2-tenths of a second (**Fig. 3, bottom, right image**).

An added benefit of eliminating the wasted time of a catch "phase" is related to injury. When the arm is in front of the body at the beginning of the stroke, the shoulder is exposed to maximum stress. If the hand begins moving back immediately after entry, the exposure time is reduced, as is the potential for injury. (The impact of "exposure time" is explained in more detail in Becker & Havriluk, 2014).

SUMMARY

The catch is often referred to as a "phase" of the stroke cycle, implying that it requires a duration of time. If a swimmer makes the catch last for even a brief amount of time, that time will be wasted and the arm will be in a weak position that stresses the shoulder. The catch must instead be considered a "transition point" between the completion of the arm entry and the beginning of the pull. A swimmer focused on a transition point rather than a phase will be more likely to improve the leverage of the arm, generate more force and reduce shoulder stress. ❖

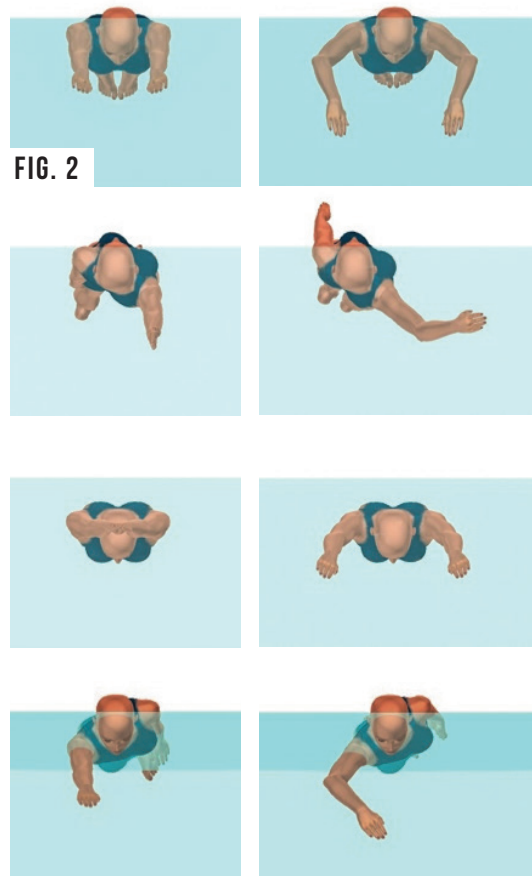


FIG. 2

FIG. 2 > (ABOVE) These images show the catch as the "transition point" between the completion of the arm entry (arm recovery for breaststroke) and the beginning of the pull (left panel). The pull begins by immediately flexing the elbow (right panel).

Dr. Rod Havriluk is a sports scientist and consultant who specializes in swimming technique instruction and analysis. His strategies provide rapid improvement while avoiding injury. He can be reached at the website for Swimming Technology Research (Tallahassee, Fla.): www.SwimmingTechnology.com.

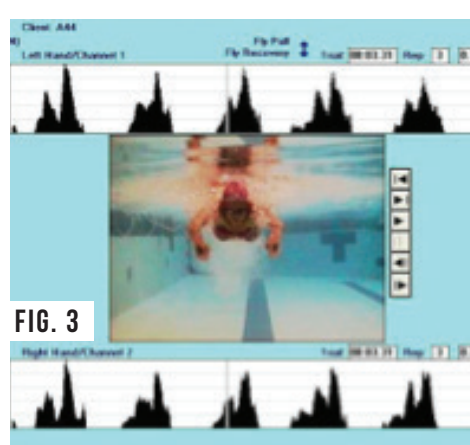
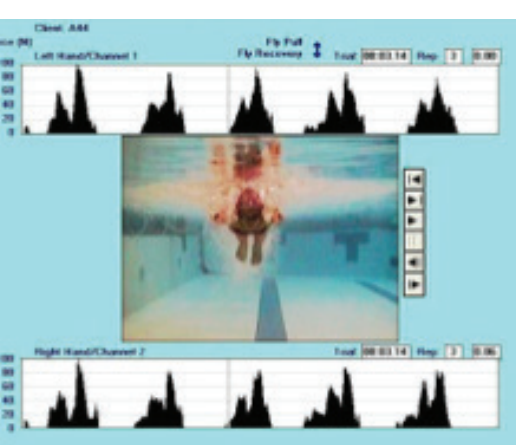
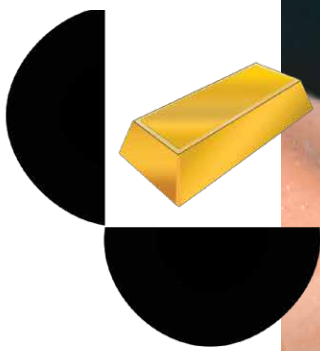


FIG. 3

FIG. 3 > (LEFT) This swimmer has completed her butterfly arm entry in the left image (at the catch transition point). She immediately flexes her elbows to begin her pull and has a substantial increase in hand force (right image).

TOTAL ACCESS MEMBERS CLICK HERE to learn more about the references for this article.



GOLDMINDS

BY WAYNE GOLDSMITH



[PHOTO BY MIKE ARON]

MAKE EVERY DAY COUNT

HERE'S WHAT A SUCCESSFUL SWIMMER'S DAY SHOULD LOOK LIKE FROM "DAWN TO YAWN."

SWIMMERS ARE SPECIAL PEOPLE. THE DEDICATION, COMMITMENT AND DISCIPLINE THAT YOU DEMONSTRATE EVERY DAY AND IN EVERYTHING YOU DO IS RARE—VERY RARE. THERE'S NOTHING YOU CAN'T ACHIEVE—NO CHALLENGE YOU CAN'T OVERCOME, AND NO BATTLE YOU CAN'T WIN.

- 5 a.m.** The alarm clock goes off...in *your* room. Not Mom's room—not Dad's room—*your* room. Take responsibility for setting your own alarm clock.
- 5:01** Get out of bed. If you've set your alarm clock to wake you up for work-out, then it's an unbreakable commitment to yourself to get to the pool. No point lying around in bed. Get up and get moving. As soon as you are up, knock on Mom and Dad's bedroom door and say, "*Good morning guys—it's time to go to practice.*"
- 5:05** Double-check that your swim bag—i.e., the one you packed last night—is ready for workout: goggles and a spare pair of goggles, a cap and a spare cap, fins, pull buoy and band, paddles, water bottle (filled with clean water), towel and anything else you need.
- 5:10** Grab a quick pre-training snack. A small bowl of cereal with some low-fat milk. A piece of toast and some fruit juice. A small container of yogurt. A banana. You haven't eaten for 10 hours or so, and you need some energy if workout is going to be great.
- 5:20** Carry your own swim bag out to the car and jump in the car.
- 5:30** Arrive at the pool. Thank Mom or Dad for driving you to training, leap out of the car and join the rest of the team on pool deck, ready and raring

to go for a great workout.

- 5:45-7:30** Workout! Give everything you have to everything you do. Thank your coach after your workout and rush to the car to head home.
- 7:45-8:15** Unpack your own swim bag, throw your wet swimsuit and towel in the washer and take a quick shower. Then it's time for a healthy breakfast of fruit, toast, cereal, yogurt and other high-performance fuel to put in your "high-performance engine." Make sure your school bag is packed not just with your books and all the things you need for math, science and history, but pack enough good food to help you get through a busy day of school and swimming.
- 10:30** Have a healthy snack. A piece of fruit or two is just the thing about now.
- 12:30 p.m.** Have a healthy lunch. Here are two suggestions:
- A chicken salad sandwich (hold the mayo), an apple, some fruit juice and two rice crackers with peanut butter.
 - A ham salad sandwich, a banana, a low-fat milk drink and three cheese and crackers.
- 3:00** Time for a healthy afternoon pre-training snack. Believe it or not, low-sugar breakfast cereals with low-fat milk are a great option for the pre-training snack. Maybe make a "smoothie"—low-fat milk, two tablespoons of vanilla yogurt, some honey, a banana and a handful of berries all blended together for a healthy, high-powered, high-energy drink to get you through afternoon workout.
- 3:15** Start on your homework. Even if you don't finish it—make a start on it because you know how tired you get after practice.
- 4:00** Head to the pool for workout. If you can, get there a little early and help coach set up for the afternoon session and encourage any younger swimmers already in the water. Swimming is a team sport.
- 4:15** Workout! Go for it. Hold nothing back. Train the way you want to race.
- 6:30** *Phew!* That was a great workout. Say thanks to coach again for a sensational session, then run to the car and head home with Mom or Dad. And if they ask you about your day, don't say, "OK," and then put your headphones back on! Talk to them about school, about training, about anything and everything else.
- 6:45** Home at last! Take a fast shower, unpack your swim bag—making sure you hang out the wet things to dry or throw them in the dryer. See if you can help Mom and Dad with dinner.
- 7:30** Dinner. Bet you were starving after your busy day. There are many healthy food options and nutritious ideas for a swimmer's dinner, but keep in mind these four general evening meal rules:

- Keep the amount of fat in your dinner low.
- Keep the amount of sugar in your dinner low.

- Include some healthy carbohydrate foods such as pasta, rice, some vegetables and whole-grain bread;
- Include some healthy protein choices such as lean meat, lean chicken or fish.

8:00 Homework time. Swimming is cool. TV is fun. Hanging out with friends and family is the greatest...but homework always comes first.

9:00 Get a head start on tomorrow. Pack your school bag. Pack your swim bag. Set your alarm clock. Then grab a small snack such as a piece of toast or a low-fat yogurt, and head off to bed to listen to some music, read a book or maybe spend some time talking with family. And always—*always*—clean your teeth before bedtime.

9:30 Lights out! As a swimmer in regular training, you need at least eight hours of quality sleep every night—particularly with the crazy-busy days you have! And a word on using electronics such as Smartphones, I-pads and Tablets in bed: "Don't!"

Research tells us that it takes around 30 minutes for your brain to slow down after playing electronic games or engaging with social media. That's 30 minutes where you could be enjoying the benefits of some good "sack-time." So, turn off the "screens" before you get into bed for a better night's sleep.

• • •

So there it is...the swimmer's day.

Swimmers are special people.

The dedication, commitment and discipline that you demonstrate every day and in everything you do is rare—very rare.

What you do in one day takes most people a week to accomplish. You are amazing!

And here's even more good news. The skills that you learn as a swimmer—including time management, personal management, work ethic, healthy nutrition and diet management—will carry you through everything you do in your life.

Nothing—*nothing*—is an obstacle to you once you've managed to live a swimmer's life for a few years.

There's nothing you can't achieve—no challenge you can't overcome, and no battle you can't win...and it's all because you've learned to live, survive and thrive in a swimmer's day! ❖

Author's Note: We realize that some swimmers start workouts and school at different times to those times used in this article. What's important is that you plan to succeed by understanding what it is you need to do every day. Make up your own daily plan—including swimming practice times, school commitments, rest, recovery and meal times, and you'll be on your way to swimming success.

Wayne Goldsmith is one of the world's leading experts in elite-level swimming and high-performance sport. Be sure to check out his websites at www.wgaquatics.com and www.wgcoaching.com.

THE COMPLETE PACKAGE

KATIE LEDECKY not only is *Swimming World's* Female High School Swimmer of the Year—and among the best women's distance freestylers of all time—but she's also “a great kid who truly cares about her community.” **BY JASON MARSTELLER**

To fans of swimming, Katie Ledecy needs no introduction as a swimmer. At age 15, she won an Olympic gold medal (800 free, 2012 London). A year later, she captured four gold medals at the World Championships in Barcelona (400-800-1500 free and 800 free relay), setting two world records (800, 8:13.86; 1500, 15:36.53).

Now 17, she lowered her world records even further to 8:11.00 and 15:34.23...last June at The Woodlands Senior Invitational—a tune-up meet more than a month out from the long course championship season.

For the record, the distance dynamo from Nation's Capital Swim Club also owns the American record in the 400 meter free as well as the 500 and 1650 yard freestyles.

Like many other world-class swimmers (e.g., Missy Franklin, Natalie Coughlin, Mark Spitz, among others), she also enjoys competing for her high school.

Representing Stone Ridge School of the Sacred Heart in Bethesda, Md., she finished runner-up in 2013 to Olivia Smoliga as *Swimming World Magazine's* Female High School Swimmer of the Year.

PICTURED > KATIE LEDECKY WAS NAMED *SWIMMING WORLD'S* 2014 FEMALE HIGH SCHOOL SWIMMER OF THE YEAR. WHILE MAINTAINING HER STATUS AS THE BEST DISTANCE SWIMMER IN THE WORLD, SHE IS FULLY SUPPORTIVE OF THE WOUNDED WARRIOR PROJECT AND ALSO VOLUNTEERS WITH BIKES FOR THE WORLD, HELP 2.0, THE CHILDREN'S NATIONAL MEDICAL CENTER AND THE CONSUMER PRODUCT SAFETY COMMISSION.



[PHOTO BY TRACY D. ENDO]

She turned in the No. 1 high school times in the U.S. in the 200 and 500 yard freestyles, including the overall national high school record in the 500 (4:31.38).

As a junior this past season, she added the overall national high school record in the 200 (1:42.38) and lowered her mark in the 500 to 4:28.71—also an American record!

And she still has one more year remaining at Stone Ridge before she moves on to swim collegiately at Stanford University with Coach Greg Meehan.

To the surprise of exactly no one, Ledecky was named *Swimming World's* 2014 Female High School Swimmer of the Year, becoming only the second person besides Missy Franklin to achieve that honor as well as win the magazine's Female World Swimmer of the Year award (2013).

But there's a lot more to Katie Ledecky than just being able to swim fast.

COMMITMENT TO THE COMMUNITY

"Katie is just such a great kid," Stone Ridge spokesperson Constance Mitchell said. "She is truly as good a kid as people say she is. She's very humble, but also has an infectious smile and truly cares about her community. She's incredibly involved in the campus ministry, and also is fully supportive of the Wounded Warrior Project."

The Wounded Warrior Project was founded in Roanoke, Va., by veterans and their friends as an organizing structure to help injured servicemen and women returning from war.

This charity is near-and-dear to Ledecky, as her late maternal grandfather, Edward J. Hagan, was a decorated World War II veteran and a physician in Williston, N.D., for 40 years. In fact, the town of Williston named the pool at the new \$76 million Williston Area Recreation Center after Ledecky's grandfather as the Edward J. Hagan, M.D. Natatorium—and Ledecky had the honor of being the first person to swim in the pool at its dedication ceremony.

Ledecky, who is incredibly busy academically—she carries a full honors schedule with AP classes—manages to load up her time with community service projects while remaining the best distance swimmer in the world. Aside from her time with the Wounded Warrior Project, Ledecky also volunteers with Bikes for the World, Help 2.0, the Children's National Medical Center and the Consumer Product Safety Commission. Bikes for the World is an organization that collects and refurbishes donated bicycles that are then supplied to developing nations. These donations could be lifesaving, as doctors can cover more ground with the free transportation a bike provides.

Ledecky's work with Help 2.0 and the Consumer Product Safety Commission are more grounded in her love of the water. 2.0 advocates for clean drinking water throughout the world, while the CPSC focuses on pool and swimming safety.

Her impact on the community has been so strong that she was honored with the Whitney Young Jr. Inspiration Award by the Greater Washington Urban League. She also was the youngest recipient of the John Carroll Society Medal by the Archdiocese of Washington.

— continued on 20

KATIE LEDECKY'S FAVORITE SETS

BY JEFF COMMINGS

Although Katie Ledecky's American record in the 500 yard freestyle at the D.C. Metro High School Championships was astounding, her two long course world records in late June in the 800 and 1500 freestyles were downright jaw-dropping.

Ledecky endured three weeks of altitude training at the U.S. Olympic Training Center in Colorado Springs, Colo., before heading to The Woodlands Senior Invitational in Texas for her world record swims.

Coach Bruce Gemmell shared one of Ledecky's workouts from Colorado that emphasized her amazing pacing abilities. This was the first of two workouts of the day:

WARM-UP/PRE-MAIN SET (3,500 meters/LC)

- 300 swim (200 free + 100 non-free)
- 8 x 100 on :10 rest—2 of each stroke IM order (25 drill/25 swim/25 kick/25 swim)
- 1 x 800 choice of gear (Ledecky used paddles and buoy)
- 4 x 100 same gear @ 1:20 (descend 1-4)
- 6 x 100 backstroke w/fins @ 1:25 (descend 1-3, 4-6)
- 2 x (6 x 50 @ :45) (1-4 free descend, 5-6 backstroke moderate)

MAIN SET (3,000 meters)

Gemmell describes this set as "pretty vanilla, an active rest day."

- 30 x 100 @ 1:30 (1 race + 1 easy)
- "I gave them each 'no-faster-than' times for the first three so they didn't kill themselves and die," says Gemmell. "Katie was (supposed to be) no faster than 1:02 on first two and no faster than 1:01 on No. 3. She, of course, went 1:01.9 on the first one—she doesn't follow directions.

"I didn't record one through five. Katie was under 1:00 on four and five, but I don't remember exactly." Following are the times for 6-15:

#6 59.0	#9 58.6	#12 58.4
#7 59.0	#10 58.6	#13 58.5
#8 58.8	#11 58.7	#14 58.5
		#15 58.2

COOL-DOWN (600 meters)

- 6 x 100 (50 free/50 back)
(2 on 1:40, 2 on 1:50, 2 on 2:00)

TOTAL (7,100 meters)

• • •

"That night she came back and did a 'flush-out set' after a kick-oriented warm-up," says Gemmell. "The set was eight 300s on 3:10 (short course yards)—just cruise as you feel, but descend the last four. She was 2:48 on the last one." ❖

LEDECKY— continued from 19

This commitment to the community might seem surprising from a typical high school student, but it's part and parcel of the Stone Ridge way. Stone Ridge is part of an international network of schools called the Network of Sacred Heart Schools, which requires engagement in the community as part of its scholastic curriculum.

The Sacred Heart name might ring a bell in the swimming community since Olympic bronze medalist Lia Neal went to school at the Convent of the Sacred Heart School in New York City, which is part of the same system. It's basically a spiritual-based sorority connection for all who attend the network. Ledecky even received support letters from Sacred Heart in Roehampton, England, during the 2012 London Olympics—even though she competed against England's own sweetheart, Rebecca Adlington.

A POWERFUL PRESENCE

Ledeky has long been a quiet force within swimming, typically letting her times do all the talking. But she's changing a little at a time.

"Katie is definitely coming out of her shell a bit," Mitchell said. "She's never going to be this huge gregarious person, but she definitely has a presence when she enters a room. That presence is powerful because it is so understated. When she comes into the room, she always gives a big smile and a hello, and you just feel the genuine warmth emanating from her."

But she still comes across as low key—perhaps so much so that her commitment last May to Stanford came as a shock. Usually, most of the swimming community knows when a decision is coming—but not with Ledeky. Everyone was sworn to secrecy until Stone Ridge sent out a short press release that voiced her love of the Stanford program and her excitement to swim for the Cardinal.

Ledeky's support system has definitely been careful with her public persona as well as the time she has to devote to such a busy life of swimming, scholastics and service. Her parents, Mary Gen and David, are two of



[PHOTO BY TYLER BELL, WILLISTON HERALD (N.D.)]



[PHOTO BY YVETTE HESS, BIKES FOR THE WORLD]





PICTURED (PREVIOUS PAGE, LEFT) > ALONG WITH A BUSY LIFE OF SWIMMING, SCHOLASTICS AND SERVICE, LEDECKY ALSO KEEPS ACTIVE WITH SPEAKING ENGAGEMENTS. HERE, SHE TALKS TO ELEMENTARY SCHOOL STUDENTS AT RICKARD SCHOOL'S (WILLISTON, N.D.) AWARDS CEREMONY FOR ITS READING OLYMPICS. WILLISTON IS THE SAME TOWN THAT NAMED THE POOL AT THE NEW \$76 MILLION WILLISTON AREA RECREATION CENTER THE EDWARD J. HAGAN, M.D. NATATORIUM AFTER LEDECKY'S GRANDFATHER.



PICTURED (PREVIOUS PAGE, BOTTOM LEFT) > LEDECKY AND HER CLASSMATES AT STONE RIDGE SCHOOL OF THE SACRED HEART IN BETHESDA, MD., HELP OUT WITH BIKES FOR THE WORLD, AN ORGANIZATION THAT COLLECTS AND REFURBISHES DONATED BICYCLES THAT ARE THEN SUPPLIED TO DEVELOPING NATIONS.

PICTURED (BELOW) >THE WOUNDED WARRIOR PROJECT AT THE WALTER REED NATIONAL MEDICAL CENTER IS A CHARITY THAT WAS FOUNDED IN ROANOKE, VA., BY VETERANS AND THEIR FRIENDS AS AN ORGANIZING STRUCTURE TO HELP INJURED SERVICEMEN AND WOMEN RETURNING FROM WAR. HERE, KATIE (CENTER) VISITS CPL. ADAM DEVINE AND HIS FAMILY.

[PHOTO PROVIDED BY WALTER REED MEDICAL CENTER WOUNDED WARRIOR PROJECT]

the key members of that system along with her club coach, Bruce Gemmell, and high school coach, Bob Walker. Her mother swam competitively with the University of New Mexico, so everyone around her knows the life of a swimmer. "Her parents are amazing," Mitchell said. "They are so grounded and have a balanced approach to her as a student and swimmer. She has the natural talent—and is passionate about swimming—but her family keeps her grounded, and I think that's a huge part of her success.

"Coach Walker truly cares about her

success, but he doesn't cater to her in any way that is a deficit to the rest of the high school team. He's her biggest cheerleader, though, and the entire family contributes to the high school team."

FOCUSED ON BEING A GOOD PERSON

With all her notoriety, one might think that Ledecky's school projects and community service would be more publicized. But that's not the case.

Her parents and her school have been extremely careful about her becoming a public figure in this way.

"Trust me, there's been a lot of pressure on Katie to use her fame to support the causes she cares deeply about," Mitchell said. "Early on, we sat down with her family and had a talk about how we wanted to be really careful not to use her as an ambassador for any cause.

"We have always wanted to be careful about that because it just wasn't appropriate at her age to be in that role. We just wanted to maintain her focus on being a good person. There will be a time and a place for that in the future when she is ready to make that decision."

Although she's not yet stepped out publicly as a leader, she's still preparing for that role. As a senior at Stone Ridge, she'll be participating in some physical education swimming units for first- through third-graders. *(How crazy would that be for a young kid: walking into P.E. and seeing the best distance swimmer in the world as an assistant? Talk about inspiring.)*

The rest of Ledecky's competitive swimming story has yet to be told, but she is already being touted as one of the greatest female distance swimmers of all time—perhaps the greatest!

She's likely to add to her amazing tale at the Pan Pacific Championships later this month, but for now, she's excited about her senior year at Stone Ridge. And who knows? She could become *Swimming World Magazine's* first back-to-back Female High School Swimmer of the Year since Dagny Knutson in 2009 and 2010. ❖

MALE HIGH SCHOOL SWIMMER OF THE YEAR

LIFE IN THE FAST LANE

CAELEB DRESSEL is fast...very fast! He is the quickest high schooler ever in the 50 yard free as well as the public school record holder in the 100 fly—reasons that *Swimming World Magazine* named him its Male High School Swimmer of the Year.

PICTURED > CAELEB DRESSEL, *SWIMMING WORLD'S* 2014 MALE HIGH SCHOOL SWIMMER OF THE YEAR, SWAM FOR CLAY HIGH SCHOOL (GREEN COVE SPRINGS, FLA.) AND TRAINED WITH HIS CLUB COACH, JASON CALANOG, AT BOLLES.



BY SHOSHANNA RUTEMILLER • PHOTOS BY PETER H. BICK

Who is the best sprint prospect to come out of high school swimming since Vlad Morozov in 2010?

Here's a hint: he holds the overall national high school record in the 50 yard free (19.29r) and is the top high schooler in the 200 (1:34.69). He also turned in the second fastest high school times during the 2013-14 prep season in the 100 free (43.36) and 100 fly (45.89, a national public school record).

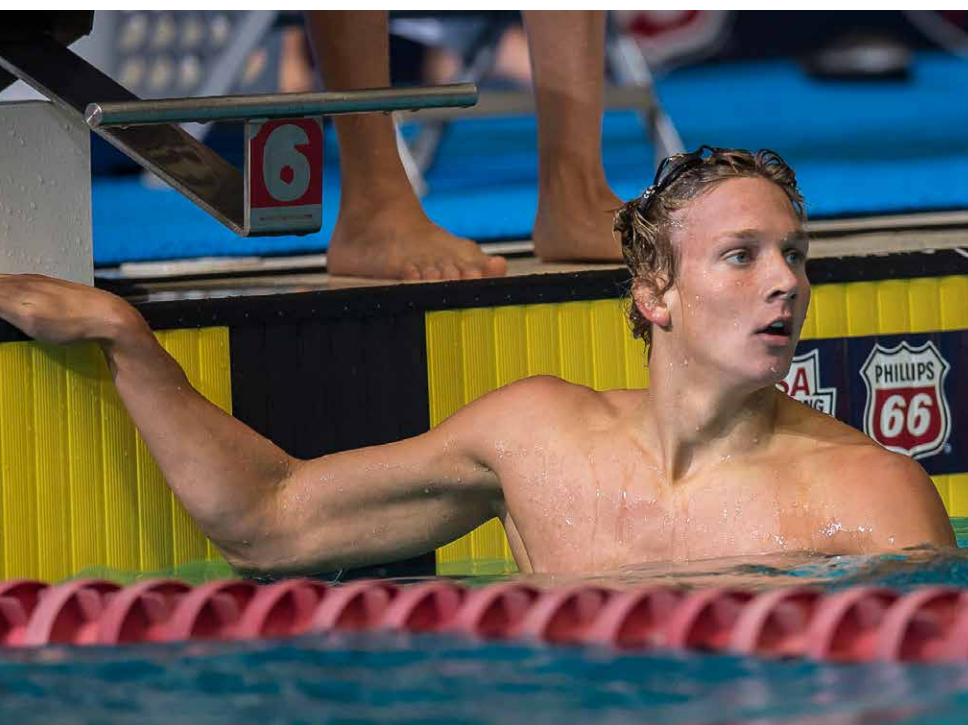
He's considered the top high school recruit for the Class of 2014. Figured it out yet?

We're talking about Caeleb Dressel. And for his accomplishments, he was named *Swimming World Magazine's* Male High School Swimmer of the Year.

AN AMAZING RUN

Entering his senior year at Clay High School (Green Cove Springs, Fla.), Dressel had just come off an incredible August at the FINA World Junior Championships in Dubai.

The 18-year-old cemented his place as one of the best young U.S. sprinters when he broke Michael Phelps' 2004 national age group record in the 100 meter freestyle with a 48.97. He also finished third in the 50 and won bronze medals in the 400 medley and 400 freestyle relays.



PICTURED (TOP) > AFTER THE HIGH SCHOOL SEASON, DRESSSEL—WHILE SWIMMING FOR HIS CLUB TEAM, THE BOLLES SHARKS—BECAME THE FIRST 18-AND-UNDER SWIMMER TO BREAK 19 SECONDS IN THE 50 YARD FREESTYLE.

PICTURED (BOTTOM) > CAELEB DRESSSEL DOMINATED SPRINT FREESTYLE THIS PAST HIGH SCHOOL SEASON, RANKING NO. 1 IN THE 50 AND 200 PLUS SECOND IN THE 100. THE CLAY HIGH SCHOOL (FLA.) SENIOR ALSO OWNS FIVE FREESTYLE NAG RECORDS (BOYS 15-16 AND 17-18) FROM THE 50 TO 200.

His performance there was a nice segue into his record-setting high school season.

About a month after swimming long course, Dressel switched to short course yards and set two public school records at the Florida Swimming Pool Association (FSPA) Invitational, Sept. 28: 50 free (19.36) and 100 fly (45.89). His 50 broke the overall national high school record of 19.43r set by Morozov in 2010.

Then, in November at the Florida 2A state champs, Dressel lowered his 50 mark to 19.29—leading off his school's winning 200 free relay—and won the 200 free (1:34.69 for the prep season's top time) and 100 fly (45.99, a tenth of a second off his public school mark).

What's even more amazing is that the following month, Dressel swam his fastest 50 yet with an 18.94—again leading off a winning 200 free relay, but this time for his winning Bolles Sharks club team at the USA Swimming Winter Junior Nationals. He became the first 18-and-under swimmer to break 19 seconds in the event!

In addition to his two 17-18 national age group records (50 yard free and 100 meter free), Dressel also owns three boys 15-16 NAGs, all long course: 50, 100 and 200 freestyles (22.39, 49.28, 1:48.64). That 15-16 record in the 50 is just 26-hundredths shy of the 17-18 mark (22.13), set by Morozov in 2010, just before his freshman year at USC.

READY TO MOVE ON

After his sensational high school career, Dressel is ready for college, where he'll train with Coach Gregg Troy at the University of Florida. Dressel's club coach, Jason Calanog, certainly prepared him well for the next level.

"The biggest thing with Bolles is that we really try to coach swimmers to be swimmers, so that they can swim anything from the 50 to the 1500 to the 400 IM," he says. "Basically, we coach them to be college swimmers. That is our main goal."

— continued on 24

Calanog has trained Dressel for several years now at Bolles. The two have developed a strong coach-swimmer relationship. Calanog is impressed at the recent high school graduate's development.

"It has been a great experience," Calanog admits. "We both get to learn from each other every day. We trust each other, put in a bunch of hard work and see it pay off. We believe in each other blindly. I think that's the best type of swimmer-coach relationship."

At Florida, Dressel will fill the void left by Brad deBorde in the sprint events. DeBorde graduated this past year as the program's most decorated sprinter. He was also the first Gator to swim under 19 seconds in the 50–18.86 at the 2014 NAAs.

"I think we've prepared (Dressel) well, and he'll do well at the University of Florida," said Calanog. "Hopefully, he can make NAAs...and also the national team...and all of those big meets for USA Swimming!"

THE PERSONAL SIDE OF CAELB

• Swimming Family

Swimming is definitely a family affair with the Dressels. Although Caeleb decided on Florida, his sister, Kaitlin, was a standout swimmer at Florida State University. Like her brother, she came out of high school as one of Florida's top sprint freestylers. During her sophomore season, she broke the Seminole school record in the 200 free. She has qualified for two NCAA Championships in the 50 and 100 freestyles.

And Dressel's father also swam collegiately for the University of Delaware.

• A Sense of Humor

Dressel's goofy personality was shown to the swimming community after he edited and produced a 10-minute behind-the-scenes video from the recent Bulldog Grand Slam in Athens, Ga. As "Newscaster Caeleb Dressel," he interviewed his teammates, coaches and competitors, using such phrases

as, "Well, there you have it, folks!" and "Thank you, ladies and gentlemen."

Showing his sense of humor, Dressel not only used an iron as a "microphone" to interview Coach Calanog in the hotel room, but he also used a sandwich to interview one of his teammates...who, of course, was eating his own sandwich! Check out the video at <http://www.swimmingworldmagazine.com/lane9/news/usa/39889.asp>.

• Thoughts on the Sport

After his incredible performance at the Junior World Championships last summer, Dressel was featured in *USA Today's* "Ultimate Athlete Profile." He was quoted as saying, "When I got back from Dubai, I realized that there's so much more than just yourself in the sport. You're representing your team, and you always have to take pride in that."

Recently, he added, "This sport keeps you humble because however big you think you are, it throws stuff at you that you're going to have to rise up against—and it's going to challenge you." ❖

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ABUNDANT

TALENT

Besides Katie Ledecky and Caeleb Dressel, who were named *Swimming World Magazine's* 2014 Female and Male High School Swimmers of the Year, there were several deserving swimmers who were in the hunt for the magazine's top high school individual award.

GIRLS' HIGH SCHOOL

BY JASON MARSTELLER

ABBEY WEITZEIL Weitzel is now the undisputed sprint queen of high school swimming. While swimming for Saugus High School (Santa Clarita, Calif.), the Canyons Aquatics-trained prodigy took down both of the sprint freestyle national high school records in May.

She broke 22 seconds for the first time in the 50 yard freestyle with a 21.98, erasing the previous record of former *Swimming World* High School Swimmer of the Year Olivia Smoliga (21.99 from 2012).

Weitzel then became the first female swimmer in high school history



PICTURED > ABBEY WEITZEIL

[PHOTO BY PETER H. BICK]

to break 48 seconds in the 100 free. First, she smoked the individual event with a 47.91, breaking Dagny Knutson's (Minot High, N.D.) 48.15 national mark from 2009. She then went even faster, clocking a 47.82 while leading off Saugus' 400 free relay.

Some might have wondered if the adrenaline from representing her high school team might have given her a bit of an extra edge at CIFs (the California sectional meet), but she proved that she can put up this type of speed when swimming for herself. In June at the Fran Crippen Memorial TYR Swim Meet of Champions, Weitzel put on a show in the long course sprint freestyle events while representing Canyons.

There's a long list of swimmers

who have done incredible things in the high school ranks, but who have had a difficult time transitioning to long course swimming. It usually takes a big-time, head-to-head win against a world-class swimmer to help these youngsters gain that extra confidence.

That's just what happened for Weitzel in Mission Viejo, as she knocked off Olympic gold medalist Jessica Hardy in both the 50 and 100 meter freestyles at the TYR SMOC meet. Weitzel picked up the first big win against Stanford's Andi Murez and Hardy in the 100 with a 55.44. She completed the sprint freestyle sweep with a 25.37 in the 50, 2-hundredths ahead of Hardy.

— continued on 26

There's every reason to believe that Weitzel can earn some huge dividends from her swift rise into the sprint elite later this month at the U.S. National Championships. With a handful of national teams being selected from this meet, Weitzel has a good chance of making at least one of those teams.

KATIE MCLAUGHLIN McLaughlin has been knocking at the door of swimming stardom for several years. She first was noticed as a young teenage butterflyer from Mission Viejo when former Nadadore Chloe Sutton was having success as an open water and pool Olympian while swimming for Bill Rose. As Sutton was gunning for event titles at Grand Prix meets, McLaughlin would be making "A" finals.

This past year, however, McLaughlin came into her own. Although she never really explained why, McLaughlin changed schools, transferring from JSerra to Santa Margarita right before the beginning of the high school season.

In hindsight, it was a perfect move for her. She delivered a dramatic performance at the CIF Southern Sectionals in May, taking down the national high school record in the 100 yard fly with a blistering time of 51.78. That cleared the 51.92 set by Jasmine Tosky of Palo Alto High in 2011. Earlier that evening, McLaughlin had won the 200 free in 1:44.66, the No. 2 time in the nation this year.

She then helped her Eagle teammates to two relay wins with a 22.11 anchor in the 200 free relay as well as a 48.46 anchor in the 400 free relay to help Santa Margarita come from behind for the win. That was her first relay split under 49 seconds. JSerra's loss was definitely Santa Margarita's gain, as McLaughlin had led JSerra to victory in the same events in 2012-13.

As for long course competition, McLaughlin hopes to make a national

PICTURED > KATIE MCLAUGHLIN

[PHOTO BY PETER H. BICK]



team later this month at the U.S. Nationals. With a lifetime best of 59.07 in the 100 meter fly, she still needs to drop some time to achieve that goal, but the door is wide open: world record holder Dana Vollmer has all but retired, and there aren't any Americans who currently rank among the top 20 in the world.

BOYS' HIGH SCHOOL

BY SHOSHANNA RUTEMILLER

JOSEPH SCHOOLING In 2013, Bolles School's (Jacksonville, Fla.) Schooling tied for third place with California's Steven Stumph in the battle for *Swimming World Magazine's* Male High School Swimmer of the Year. With an additional year of development, the high school senior moved up a spot to rank No. 2 this year behind Caeleb Dressel.

The swimming community has become accustomed to seeing incredible performances from Schooling almost every time he dives into the pool. As a junior, he set the overall national high school record in the boys 100 yard butterfly (46.50) and was a key member on three record-setting

PICTURED > JOSEPH SCHOOLING

[PHOTO BY MIKE COMER/PROSWIMVISUALS.COM]



Bolles School relays.

This past season, he competed in the same events, and once again, he was a key member on three Bolles relays. But instead of setting three overall national records, the team finished second (200 medley and 200 free) and sixth (400 free).

At the Florida state meet, Schooling took the 100 fly overall national high school record down to 45.52, winning the race by *four seconds!* His time bettered the 45.89 mark that Dressel had set only two months earlier at the mid-season FSPA Invitational.

Schooling also turned in some very swift performances during the season in the 200 IM (1:45.21, the second fastest high school time from 2013-14), 100 free (43.72, No. 4) and 50 free (19.89, No. 6).

The Singapore native moved to the

Singapore at the 2012 London Olympics in the 100 and 200 fly, finishing 35th and 26th.

This fall, Schooling will attend the University of Texas, where he will be swimming for Coach Eddie Reese and joining Jack Conger, the 2013 Male High School Swimmer of the Year. Conger and Schooling will be able to battle head-to-head every day while training butterfly, with only a tenth of a second separating Conger's 100 fly time at this year's NCAAs (45.61) from Schooling's high school record (45.52).

While at Texas, Schooling hopes to achieve one of the primary goals set by the Bolles School: to become an outstanding force in college swimming.

COREY OKUBO Okubu of University High School (Irvine, Calif.) had an

tion Division I Championships in May, when he lowered the meet record twice—in prelims with a 1:46.92, then in finals with a 1:45.42.

His winning time ranks as the third fastest nationally in the event for the 2013-14 season, right behind Curtis Ogren's (Mountain View St. Francis, Calif.) 1:44.90 and Schooling's 1:45.21.

Okubo also finished second in the 100 fly at CIFs with a 47.53—the eighth fastest high school time in the country this past season. He added a 21.45 50 fly split in the 200 medley relay at the state sectionals that helped his teammates set a Division I meet record (1:30.10).

Okubo will swim for Princeton University—a commitment he made during the fall of his senior year. Afterward, he said, "Thank you to everyone who has supported me throughout

the years. I am very excited to be able to swim for Princeton and be a part of the Princeton culture."

Following his high school graduation, Okubo made waves at the Fran Crippen Memorial TYR Swim Meet of Champions, June 26-29, in Mission Viejo. Representing the Aquazot Swim Club in Irvine, he won four events, including a 200 meter butterfly/backstroke double on Day 2 (1:58.60, 2:02.08). His butterfly time was just 1-1/2 seconds off the meet record. He also won the 400 IM by nearly seven seconds with a 4:20.39 and the 200 IM in 2:03.56.

These performances bode well for what he can do his freshman year at Princeton. Okubo joins a solid group of Ivy

League swimmers and hopes to qualify for the NCAA Division I Championships his freshman year. ❖



PICTURED > COREY OKUBO

[PHOTO BY PETER H. BICK]

United States when he was 13 to train with Coach Sergio Lopez at the Bolles School. At 15, Schooling represented

outstanding senior season. The versatile swimmer made his mark in the 200 yard IM at the CIF Southern Sec-

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VIRTUAL SWIMMING

EVEN THOUGH THE WORLD'S TOP SWIMMERS WON'T COMPETE HEAD-TO-HEAD THIS YEAR, THE NEXT BEST THING IS TO PREDICT WHAT MIGHT HAPPEN IN A VIRTUAL SHOWDOWN BETWEEN SWIMMERS AT THE PAN PACIFICS AND EUROPEANS, WITH BOTH CHAMPIONSHIPS TAKING PLACE IN AUGUST.

STORY BY JEFF COMMINGS

PHOTOS BY JOAO MARC BOSCH

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PICTURED> IS GERMANY'S **MARCO KOCH** THE MAN TO STOP DANIEL GYURTA'S RUN IN THE MEN'S 200 BREAST? GYURTA HAS BEEN UNSTOPPABLE IN THE EVENT SINCE 2009, BUT KOCH—WHO FINISHED RUNNER-UP AT WORLDS TO GYURTA—WILL BE SWIMMING BEFORE A HOME CROWD AT EUROPEANS.

What's equally frustrating and exciting about the even-numbered years between Olympics is the lack of a world championship competition. The top swimmers in the world do not gather in one place for the right to call themselves the best in the world in a long course pool. That's the frustrating part.

What makes the mid-year in the quadrennium exciting? We're bound to see a lot of virtual races taking place among several athletes at the Pan Pacific Championships (Aug. 21-

24, Gold Coast, Queensland, Australia) and the European Championships (Aug. 18-24, Berlin, Germany), and as a result, the times on the scoreboard could be jaw-dropping.

Let's take a look at 10 of the most-anticipated virtual matchups set to take place this month, five of them in men's races and five in women's events. It's important to note that as of press time, the American roster for pool swimming at the Pan Pacific meet had not been set, so the American names in the race analyses that follow are projections only.

— continued on 30

MEN'S EVENTS

100 FREESTYLE

Nathan Adrian vs. Vlad Morozov vs. James Magnussen

Adrian is likely to line up in the 100 free final at Pan Pacs next to Magnussen in their third head-to-head showdown in as many years, and a couple of factors give each of them an advantage.

Magnussen will have just competed at the Commonwealth Games, and a week in Scotland might take some of the edge off, opening the door slightly for Adrian to take the win. However, Magnussen will be swimming in front of thousands of screaming Aussies, which could be the push he needs to get his first Pan Pac victory.

Over in Europe, Morozov appears to be steadily improving in the 100, and he could be deadly in Berlin. Look for the Sizzling Siberian to dip under 48 seconds, but he'll have to be faster than 48.7 if he wants to beat Adrian and/or Magnussen.

Other top sprinters in the mix: Australia's Cameron McEvoy, the other Americans who make the squad or, perhaps, one of Brazil's top sprinters (Marcelo Chierighini, Matheus Santana, Joao De Lucca).

200 FREESTYLE

Yannick Agnel vs. USA

Agnel appears to be on a roll in the 200 free, dominating the field at the 2012 Olympics and 2013 World Championships. He's likely to win the European title with little difficulty, but can he swim faster than the Americans and Australians?

Conor Dwyer appears to be the American most likely to upend Agnel in the 200 free, which would be a major coup for Dwyer in his ascent in the ranks. It would also be huge bragging rights when the two return for training in the fall at the North Baltimore Aquatic Club. Ryan Lochte should never be counted out in the big race, knee injury or not.

Paul Biedermann, the world record holder, appears to be on an upswing this year, but might not be at the point



to challenge Agnel. Biedermann, however, should be wearing a silver medal around his neck at the Europeans if he can get the home crowd behind him.

200 BACKSTROKE

Radoslaw Kaweckii vs. Ryosuke Irie vs. USA

This could turn out to be one of the closest virtual races among the men. Last year at Worlds, the top four finished within 1.3 seconds of each other, with Lochte laying down the hammer in the final 50 to win by 5-tenths.

Lochte's knee injury is not likely to affect his backstroke abilities, so we can expect him to defend his Pan Pac title. Irie has been a solid performer this season, and his fastest time of the year (1:53.91) would have been second at Worlds last year. He should be backed up by another contender from Japan, Kosuke Hagino.

PICTURED (ABOVE, TOP) > IT'LL BE THE RUBBER MATCH FOR **NATHAN ADRIAN** AND **JAMES MAGNUSSEN** AT PAN PACS: THE USA'S ADRIAN WON OLYMPIC GOLD IN 2012, WHILE THE AUSSIE FINISHED FIRST AT LAST SUMMER'S WORLD CHAMPIONSHIPS.

PICTURED (ABOVE, BOTTOM) > AFTER FINISHING OUT OF THE MEDAL PICTURE IN THE MEN'S 200 BACK AT BARCELONA, JAPAN'S **RYOSUKE IRIE**—THE OLYMPIC SILVER MEDALIST—WILL BE LOOKING TO TURN IN THIS YEAR'S FASTEST TIME IN WHAT COULD TURN OUT TO BE ONE OF THE CLOSEST VIRTUAL RACES AMONG THE MEN.

Poland's Kawecki has been getting better each year, starting with his surprise short course world title in 2012, and he will be looking for a second straight European title.

200 BREASTSTROKE

Christian Sprenger vs. Daniel Gyurta vs. Marco Koch vs. Japan

Sprenger hadn't swum the 200 breast in four years, but he made a triumphant return to the event this year to qualify for Australia's international squad. Sprenger is the former world record holder and likely has his eyes on Akihiro Yamaguchi's 2:07.03. Anything in the 2:07 range at the Pan Pacific Championships would be exciting, and if that happens, it'll be a wake-up call for Gyurta, the man who has been unstoppable in this event since 2009.

Koch, however, could be the man to stop Gyurta's run. The German will have a home crowd pushing him along in the 200 breast, and that could be the difference in the race at Europeans.

Japan's Yauhiro Koseki and Kazuki Kozinata will carry the flag for their country's rich breaststroke tradition, and will try to keep the Pan Pac title in Japanese hands after Kosuke Kitajima's win in 2010. If Sprenger can push the pace and hold on, we could see three swims in the 2:08-low range in Australia.

400 FREESTYLE RELAY

USA vs. France

This is turning out to be one of the most thrilling rivalries in swimming. Dating back to the 2008 Olympics, it's pretty much been France and USA on the medal podium, with a few other countries thrown in. Australia will be in the mix for a medal, but does not appear to have the roster to challenge whatever four Americans will line up in Australia this month. And don't count out Brazil.

France appears to be struggling with its lineup this year. Agnel and Jeremy Stravius appear to be the only two sprint freestylers on their game this year, but relays are not won by just two swimmers. If France isn't up to the challenge, Russia, led by Moro-

zov, could be the spoiler in this epic rivalry.

WOMEN'S EVENTS

200 FREESTYLE

Missy Franklin vs. Federica Pellegrini

Franklin and Pellegrini will renew their battle from last year's World Championships, where Pellegrini lost her world title to Franklin. Pellegrini will have a challenge from Sarah Sjostrom and others at Europeans,

while Franklin's biggest threat could be the other U.S. entrant in the event at Pan Pacs as well as Australia's Emma McKeon and Bronte Barratt. Either way, expect these two to win at their respective meets, but which one will post the faster time?

Franklin has been on a hot streak in freestyle in 2014, breaking the short course yards American record. Pellegrini is also swimming well this year, posting a 1:55.69 at nationals.

— continued on 32

PICTURED > AUSTRALIA'S CATE CAMPBELL, THE REIGNING WORLD CHAMPION IN THE 100 FREE, SHOULD WIN AT PAN PACS, MAKING HER VIRTUAL RACE WITH SWEDEN'S SARAH SJOSTROM AT EUROPEANS ALL THE MORE EXCITING. AT PRESS TIME, CAMPBELL RANKED NO. 1 IN THE WORLD, JUST 5-HUNDREDTHS FASTER THAN SJOSTROM.



PICTURED > EVEN THOUGH MIREIA BELMONTE HAS WON 11 GOLD MEDALS AT THE EUROPEAN CHAMPIONSHIPS IN HER CAREER, SHE'S NEVER WON THE WOMEN'S 200 FLY (LC). BUT THAT COULD CHANGE THIS SUMMER FOR THE SPANIARD WHO COLLECTED TWO SILVER MEDALS AT BOTH THE OLYMPICS (800 FREE, 200 FLY) AND WORLD CHAMPIONSHIPS (200 FLY, 400 IM).



Both are likely to go under 1:55 this summer, but will this virtual battle push them under 1:54?

400 INDIVIDUAL MEDLEY

Katinka Hosszu vs. USA

Hosszu is the reigning world champion in the 400 IM. Elizabeth Beisel was the bronze medalist. Hosszu is the queen of the IMs at the moment, but Beisel is the most likely to overthrow Hosszu for a seat on the throne. After a surprising 4:33 in the 400 IM at the Arena Grand Prix in Santa Clara, Beisel finally looks on pace to break 4:31, which she'll need to do to beat Hosszu this year.



PICTURED > HUNGARY'S KATINKA HOSSZU, WHO CAPTURED BOTH IM RACES AND FINISHED THIRD IN THE 200 FLY IN BARCELONA LAST SUMMER, HAS BEEN ESPECIALLY TOUGH AT THE EUROPEAN CHAMPIONSHIPS. IN HER CAREER, SHE'S WON 10 GOLD, SIX SILVER AND TWO BRONZE MEDALS!

Maya DiRado and Caitlin Leverenz will be battling for a spot on the Pan Pac roster in the 400 IM, and either one could put up a swim that would put a scare into Hosszu. The key for the Hungarian to win the race is not to overswim the first half, as she might have done at Worlds. The key

for the Americans is to swim to their strengths.

And, of course, let's not forget this year's top two swimmers in the event: China's Ye Shiwen (who ranked third last year) and Spain's Mireia Belmonte (No. 2 in 2013).

100 FREESTYLE

Cate Campbell vs. Sarah Sjostrom

Campbell and Sjostrom have had similar career trajectories. Both of them had stunning highs when they were 15, then were unable to replicate their performances in later years. Both of them are back on top, and though Campbell is the reigning world champion in the 100 free, Sjostrom has been putting a strong focus

on her sprint freestyle.

Campbell is likely to win the 100 free with little difficulty at the Pan Pacific Championships. At press time, these two were the only women to have broken 53 seconds in 2014, with Campbell's 52.68 just 5-hundredths of a second faster than Sjostrom.

Give the edge to Campbell, based on her pedigree in the event.

200 BUTTERFLY

Natsumi Hoshi vs. Mireia Belmonte vs. Katinka Hosszu

Belmonte is on track to have a very successful European Championships, but the Spaniard might have some trouble with Hosszu, who will race

Belmonte in several events. This is probably the only event in which Belmonte will be favored over Hosszu.

The race for gold at Europeans will be electric, as Belmonte and Hosszu put on a good race at last year's Worlds—even though it was a battle for the silver and bronze medals behind China's Liu Zige. The two were no more than 31-hundredths apart for the first 150 meters before Belmonte pulled away in the final 50 to edge Hosszu by 81-hundredths. That could happen again in Berlin, but Belmonte won't have those 1,000-plus hometown fans in the arena as she did last year in Barcelona to give her added motivation.

Another swimmer to watch at Europeans is Judit Ignacio, who finished less than a half-second behind Belmonte at the Spanish Spring Championships in April—and ranked No. 3 in the world at press time behind Hoshi and Belmonte.

Hoshi is in line to win the 200 fly at Pan Pacs, and her time could threaten the sub-2:05 Hosszu and Belmonte are likely to post. The only problem for Hoshi is that she might not have a lot of competition.

400 FREESTYLE RELAY

USA vs. Australia vs. the Netherlands

Australia and the United States have had a longstanding Olympic rivalry in the 400 free relay that began in 1956, continued through 1964, then was renewed in 2004. With a boisterous home crowd behind them, the Aussies could exact revenge on the Americans this summer for the stinging loss at Worlds last year.

The Netherlands has medaled in this event at the last four Olympiads—and seven of the last nine—and Holland should take the win at Europeans. However, the thought of a gold medal in Berlin might not be enough. These women might want to boast that they put together the fastest relay for 2014, which would give them momentum going into next year's Worlds.

Right now, though, the Americans are favored. The depth of the USA sprint corps is too deep to ignore. ❖

06

Beginning in its April issue and running through January 2015, *Swimming World Magazine* is counting down the top 10 triumphs and tragedies in the history of swimming. *This month:*

SAVING ATLANTA: THE BATTLE AGAINST ILLEGAL DRUGS

BY CHUCK WARNER

Thirty-four Chinese journalists descended on Rome for the 1994 World Swimming Championships to cover what was referred to by some as the creation of a “new world order” in women’s swimming.

In six short years since China won its first Olympic swimming medal in 1988, it produced a team of “superwomen” that won 12 of 16 gold medals and set five world records in Rome. Some international coaches and journalists voiced accusations that the Chinese meteoric rise must be the result of cheating by utilizing performance-enhancing drugs (PEDs). They feared for the integrity of the sport and the veracity of the Olympic Games that would be hosted in Atlanta only two years hence.

“This is like competing against men,” declared USA head coach Richard Quick. The “new world order” generally consisted of muscular athletes who spoke with deep voices. They swam with poor technique, but overpowered the water. That led one disgusted British swimming journalist to refer to one Chinese gold medalist as the “Flying Garbage Truck.”

Zhou Ming, China’s 36-year old assistant coach, vehemently denied the doping allegations: “You ask questions about doping because of misunderstanding and jealousy. It’s sort of a political thing. The sports world has always been the domain of Western people. They just can’t tolerate Asian people being good at sport.” He touted culture and lifestyle as part of the reason they were able to improve so much: “You hardly know anything about the work going on in China.”

Mark Schubert had seen up close the heartbreak of naturally produced

athletic achievement having Olympic glory pirated by drug-infused competitors. He had coached Shirley Babashoff through the 1976 Olympics when she stood on the award podium four times to congratulate a winner that was later revealed as having used PEDs.

“We’ve been through this before with the DDR,” Schubert said. “Now we’re going through it again and people are just fed up.”

Suspicious about the Chinese swimmers came in part from four of them having been recently suspended for two years for positive tests. There were also a few sport leaders who knew of Zhou Ming’s background. He had a great coaching education, was a brilliant physiologist and scientist, but it was also noted that he had studied in Leipzig, Germany, where the DDR system of doping had originated.

WHY WOULD THE CHINESE CHEAT?

In the Western world, we often take human rights for granted. There are cultures in the world in which the “glory of the state” preempts an individual’s rights—somewhat like the movie, “The Hunger Games.” In the systematic DDR program (late 1960s-90s), the athletes were unaware that their potential increased by PEDs.

— continued on 34

PICTURED > AFTER ITS DOMINATING PERFORMANCE IN ROME, CHINA ONLY WON ONE GOLD MEDAL TWO YEARS LATER IN ATLANTA, COURTESY OF LE JINGYI IN THE 50 FREE. AT THE WORLD CHAMPIONSHIPS, LE SET TWO INDIVIDUAL WORLD RECORDS IN WINNING THE 50 AND 100 FREE.



[PHOTO BY TIM MORSE]

The “glory of the state” took precedence over the individual’s health or that of their yet-to-be-born children.

Finding ways to gain an advantage through something ingested is nothing new. Stories from the early Greek Olympics of athletes consuming hideous organs in the hope of gaining an advantage have come down to us from the millennia.

PICTURED > JAMES MALCOLM “TAFFY” CAMERON, HONORARY SECRETARY OF THE FINA MEDICAL COMMISSION FROM 1992-2000, WAS INDUCTED INTO THE INTERNATIONAL SWIMMING HALL OF FAME IN 2003 FOR HIS OUTSTANDING CONTRIBUTIONS TO HELPING MAKE SWIMMING A DRUG-FREE SPORT.

[PHOTO PROVIDED BY INTERNATIONAL SWIMMING HALL OF FAME]



But scientific discoveries in modern times have provided anyone—coaches, doctors, trainers, athletes and parents—with access to an expanding pharmaceutical industry that can help female athletes increase testosterone enough to match the level in males and decrease the time it takes for athletes to adapt to heavy training loads. There are also agents that hide or mask some PEDs, provided they are in the athlete’s system at the correct

time. Catching cheaters became even more difficult with the development of synthetic human growth hormone (HGH), which stimulates enormous physical development and is virtually undetectable in the human body.

In 1994, the international system of testing only at competitions made it relatively easy to hide PEDs from the testing authorities. And the Chinese made sure to avoid any and all competitions where testing would be performed.

BATTLING FINA AND THE IOC

FINA (the International Swimming Federation) resisted the accusations of wrongdoing by pointing to the 169 drug tests on all swimmers at the competition, none of which were positive. The image of a clean sport and the publicity of world records were good for the business of swimming, and both FINA and the IOC had a lot to gain from China becoming active in bidding for the Olympics and other international events. A few years earlier, China had narrowly lost a vote to host the 2000 Olympics in Beijing when Sydney, Australia won by a 45-42 margin. The Chinese had no plans to bid on the 2004 Games. Therefore, could they

have lapsed in looking out for their reputation as clean sportsmen?

A number of journalists around the world worked to expose China’s systematic doping. *Swimming World*, under the direction of Phillip Whitten, provided the facts that showed China’s ascension to the top of the world so quickly was a statistical anomaly. Whitten, along with journalists Craig Lord (Great Britain), Sylvie Josse (France) and Australians Nicole

Jeffrey and Wayne Smith, all agreed to share information in a uniquely coordinated effort to multiply the impact of their work. Shortly thereafter, other journalists joined the effort, including some from China. At the same time, the coaches organizations—WSCA and ASCA—joined in the fight. Australian legend Forbes Carlile and ASCA executive director John Leonard were indefatigable in the struggles for drug-free competition.

Before leaving Rome, 18 sport leaders signed a document asking FINA to increase testing and—most importantly—begin random, unannounced testing in training.

Doping or not, many top athletes were focused on winning gold at the 1996 Atlanta Games. Prior to the 1994 World Championships, Hungarian legend and reigning world record holder Kristina Egerszegi had been unbeaten in backstroke events for five years. But China’s He Cihong won both backstrokes in Rome, leaving Egerszegi with a silver medal in the 200 and out of the medal picture in the 100.

“I was going to retire after Rome, but not now,” she said. “I will be in Atlanta to prove the Chinese are beat-able.”

Australian Kieren Perkins, who was named by FINA as its 1994 World Swimmer of the Year, wanted further action. He asked that China be banned from the sport and that the medals and records be stripped from both Chinese and former East German swimmers known to have used drugs. He scolded FINA when he said, “It’s quite amazing that they are prepared to give an award to someone like myself for giving swimming around the world a good image when they’re doing everything they can to give it a bad image.”

But the Olympics were just 23 months away.

CAMERON’S BAND ORGANIZES

James Malcolm Cameron, a professor of forensic science at the University of London, was the honorary secretary of the FINA Medical Commission from 1992-2000. Affectionately known as “Taffy,” Cameron was a

former rugby player who loved clean sport and the prevention of childhood drowning. He had become famous for his work as a forensic scientist—kind of an earlier-day CSI—helping resolve difficult crimes. And in his new role, he recognized the need for random testing and began implementing it.

Cameron advised testers to meet the Chinese national swimming team a month after the World Championships in 1994 as they arrived in Japan for the Asian Games.

Awkwardly, on the eve of those Games, IOC President Juan Antonio Samaranch defended the Chinese, declaring them “clean.” (Interestingly, in 1992, China nominated Samaranch

Japan voted 3-1 to block China’s participation due to an increasing volume of evidence that pointed to doping by its swimmers. This was the first time that a nation had been banned for the use of PEDs.

At the FINA directors meeting in March of 1995, there was a resolution introduced to place China on a form of probation, but it never came to a vote. FINA instead issued a statement saying it had no proof of systematic doping by Chinese swimmers and planned no further action against China other than more short-notice tests. Although China was kept out of the Pan Pacific Games, neither FINA nor the IOC had such plans for the At-

English club, Cameron convened a meeting of Cameron’s Band—those with intimate knowledge of the spying. They discussed their options, which included the possibility of exposing the Chinese espionage and then attempting to prove their case in the international courts. Unfortunately, time was not on their side, as by the time they went through that process, the Olympics would be over.

“Taffy” Cameron, however, had another idea. He suggested they schedule taking a high frequency of samples, only about 20 percent of which would actually be tests. The hope was that this would disrupt the alleged Chinese drug program by interrupting the timing and consumption of PEDs.

But there was no way to know if the plan was working...until Atlanta.

The first women’s event of the ’96 Atlanta Games was the 400 individual medley. The results were noted carefully. The Chinese were simply terrible. The next event concluded with similar results. By the completion of the Olympic women’s swimming, China had only claimed four individual medals: one gold, two silver and one bronze. The relays that had rewritten the world record books in Rome won just one silver medal and one bronze. And Kristina Egerszegi defended her title in the 200 back, becoming only the second swimmer to win the same event at three successive Olympiads.

As the competition concluded, Coach Zhou Ming approached USA head coach Richard Quick on the pool deck and said, “You won...*this* time.”

CAN YOU CATCH ALL THE CHEATERS?

Circumstantial evidence tends to need to rise to the level of “corroborating evidence” to convict someone in a court of law. Few understand the signs of PED use—fortunately, Cameron’s Band did before Atlanta and was courageous enough to speak up and act.

There was also a rumbling of suspicion surrounding Irish swimmer Michelle Smith de Bruin, who had a remarkable Olympics, winning three gold medals, including the 400 free-style—an event in which she hadn’t

— continued on 36



[PHOTO BY TIM MORSE]

PICTURED > IRISH SWIMMER MICHELLE SMITH DE BRUIN, AMID ALLEGATIONS OF DOPING, WAS A TRIPLE GOLD MEDALIST AT THE ATLANTA GAMES IN 1996. AFTER A RANDOM DRUG TEST IN JANUARY 1998, SHE WAS BANNED FROM INTERNATIONAL COMPETITION FOR FOUR YEARS FOR TAMPERING WITH HER URINE SAMPLE BY USING WHISKEY, BUT WAS ALLOWED TO KEEP HER GOLD MEDALS FROM ATLANTA.

for the Nobel Peace Prize.) The tests of the Chinese team were eventually processed and showed 11 different athletes testing positive. They were later stripped of 22 medals from the Asian Games.

In the 23 years that FINA had done doping controls, there had been only 24 positive tests. However, the two-year running total for the Chinese included 13 positive drug tests involving 11 swimmers.

Looking forward to the 1995 calendar, the major international competition for the Chinese swimming team was the Pan Pacific Games. However, the Games’ four charter nations of Australia, United States, Canada and

lanta Olympics.

There were 11 months to the opening ceremonies.

A STRATEGY TO DISRUPT THE CHINESE

A few months later, swimming officials suspected that some of the Chinese coaches had found a way to access secure information in an effort to track when and where testing would be performed. Local and national authorities were notified, and by planting a few select morsels of disinformation, an illegal information-gathering effort by the Chinese was revealed.

In January of 1996, in his plush

met the Olympic qualifying time until early July, requiring a special waiver to enter the event. Was it coincidental that her husband/trainer had been banned as an athlete for doping?

In January of 1998, testers knocked on the door at the home of Smith de Bruin, who reportedly submitted a urine sample while attired in a baggy sweater. The sample contained so much whiskey that if it weren't tampered with, she would be dead. Evidently, her sweater shielded the view of a container of an Irish blend that she poured into the sample.

Tampering is considered as severe a penalty as the taking of banned substances themselves. In her case before the Court of Arbitration for Sport, it was revealed that Smith's sample contained a precursor of an anabolic steroid. She was banned from international competition for four years, but allowed to keep her gold medals from Atlanta.

Almost simultaneous to the testers appearance at Smith de Bruin's house, the Chinese team was en route to Perth, Australia for the World Championships. The head coach for the team was Zhou Ming.

After first arriving at the Sydney airport, customs officers seized 13 vials of growth hormone, which were found in swimmer Yuan Yuan's bag. It was enough to supply the entire women's team throughout the competition.

By the time the team arrived in Perth, Yuan was escorted by police from the airport and was banned from the competition.

Later, in testimony to police, Coach Zhou admitted to packing Yuan's bag, suggesting how a coach could treat children as lab rats for his own glory. His "lifetime ban" by FINA was reduced by China to eight years.

• • •

James Malcolm "Taffy" Cameron was inducted into the International Swimming Hall of Fame two weeks

before he died in 2003. He leaves behind many members of Cameron's Band, including honored journalists, who remain just as committed as was he to the ideal of clean sport.

Author's Note: Today, the fight for a clean sport continues, and so does the political debate for implementation of new standards. For example, a relatively new screening method for PEDs called, "High Through-put Testing," is being used widely and relatively inexpensively in medical research and forensic laboratories. Yet despite its effectiveness, leaders in the U.S. Anti-Doping Agency (USADA) refuse to use it for screening human samples in sports. ❖

Chuck Warner is a part of Swimming World Magazine's editorial board and author of "Four Champions: One Gold Medal" and "And Then They Won Gold." Both books are available for purchase online at www.SwimmingWorld.com. Next month: "Swimming's Top 10 Triumphs and Tragedies: #5."



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4 EXERCISES FOR A STRONGER BACK

BY J.R. ROSANIA PHOTOS BY KAITLIN KELLY
 DEMONSTRATED BY TAMMY GOFF
 AND MARCIE BLACK HERZOG

As we age, our muscles and overall strength weaken. When this happens, one of the areas affected is our lower back. As swimmers, it is important to keep our core, glutes and lower back muscles strong. These areas are our back “protectors.” Weakness in these three muscle groups can result in slower times and increased back discomfort.

This month’s “Dryside Training” article focuses on the mid-section muscles. By performing this group of exercises, you will strengthen these key muscles and reduce the possibility of lower back issues.

Start by completing two sets of 10 repetitions. Slowly increase reps and sets until you can complete three sets of 12-15 reps. Perform this back routine two to three times a week.

Stay strong...and don't look back! ❖

MEET THE ATHLETES

Tammy Goff (yellow top) is a Masters swimmer and a firefighter from Glendale, Ariz. Marcie Black Herzog (blue top) is a former swimmer from the University of Illinois who currently swims for Phoenix Swim Club Masters.

MEET THE TRAINER

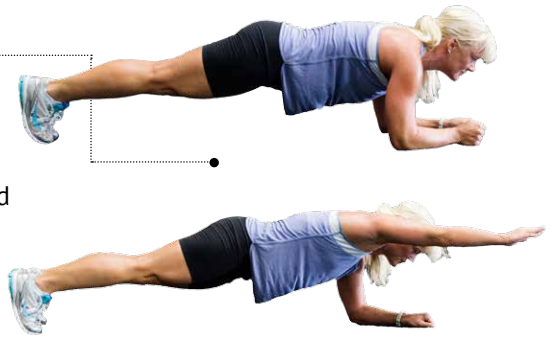


J.R. Rosania, B.S., exercise science, is one of the nation’s top performance enhancement coaches. He is the owner and CEO of Healthplex, LLC, and has finished the Ironman Triathlon 18 times. He also serves as Swimming World Magazine’s fitness trainer and was named one of “America’s Top Trainers” by Men’s Journal and Vogue magazines. Check out Rosania’s website at www.jrhealthplex.net.

1

PLANKS WITH AN ARM STROKE

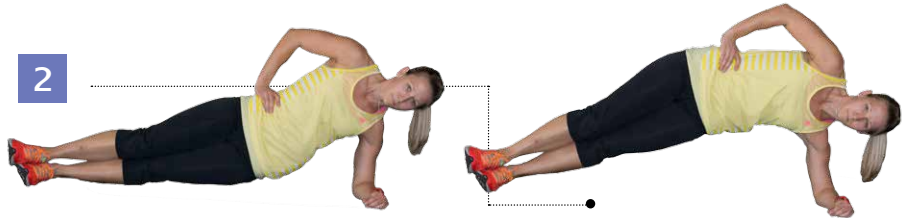
Starting in a plank position, extend one arm off the floor and extend it forward, stabilizing on your opposite side. Bring your arm back and alternate to the other side.



2

SIDE HIP-UPS

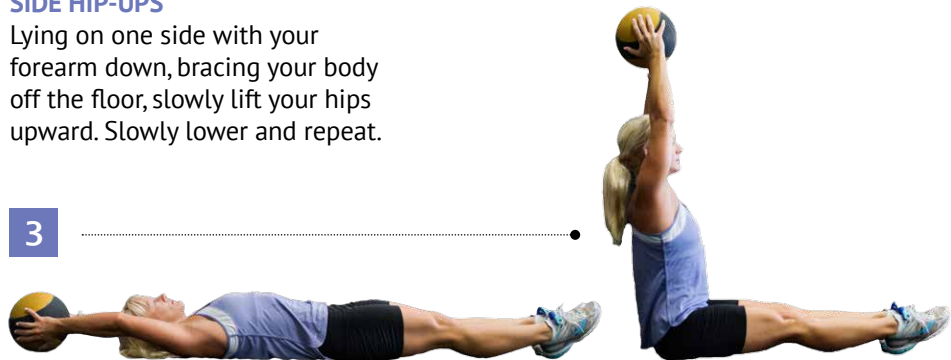
Lying on one side with your forearm down, bracing your body off the floor, slowly lift your hips upward. Slowly lower and repeat.



3

SUPINE TO STREAMLINE SIT-UP WITH MED BALL

Starting flat on your back with a medicine ball in your hands, sit up to a streamline position until your upper body is vertical. Lower and repeat.



4

STEP-UP WITH MED BALL

Begin with a medicine ball about chest high and off your body. Step up onto a 6- to 20-inch platform. Raise the med ball overhead to a streamline position. Return to your starting position and alternate legs.



BALANCE YOUR ENERGY SOURCES

There are three major sources of energy in the diet: carbohydrate, fat and protein. Endurance training increases the body's needs for each of these macronutrients.

Research suggests that endurance athletes should aim to consume at least 1.2 grams of protein per kilogram of body weight daily (0.55 g/lb.).

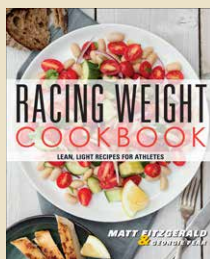
According to the American College of Sports Medicine, fats should account for at least 20 percent and more than 35 percent of the calories in an endurance athlete's diet.

Carbohydrate needs are more variable and depend on training volume. (For more detailed information, pick up a copy of "Racing Weight Cookbook: Lean, Light Recipes for Athletes" by Matt Fitzgerald and Georgie Fear, available online from VeloPress.com—see ad, page 45.)

• • •

In this month's nutrition column, *Swimming World* continues to provide flavorful, easy recipes for athletes. This month's recipe comes from the "Racing Weight Cookbook," a practical cookbook that makes it simple to dial in the right mix of carbs, fat and protein that will satisfy your appetite with high-quality, well-balanced meals.

Try out this sample recipe (at right). It is one of the book's author's most common post-workout meals—a perfect fit for those times when some high-quality carbohydrates and protein are desired, but without a lot of fuss. If you have leftovers, it also makes for a great lunch. ❖



Republished with permission of VeloPress from "Racing Weight Cookbook: Lean, Light Recipes for Athletes."

ONE-POT QUINOA, CHICKEN & VEGGIES

INGREDIENTS:

- 2-1/2 cups water
- 1 cup quinoa, rinsed and drained
- 2 teaspoons organic chicken or vegetable bouillon
- 2 cloves garlic, crushed
- 2-1/2 cups cooked chicken breast or rotisserie chicken, chopped
- 2 zucchini, chopped
- 1/2 cup sun-dried tomatoes, coarsely chopped
- 1/2 teaspoon dried basil

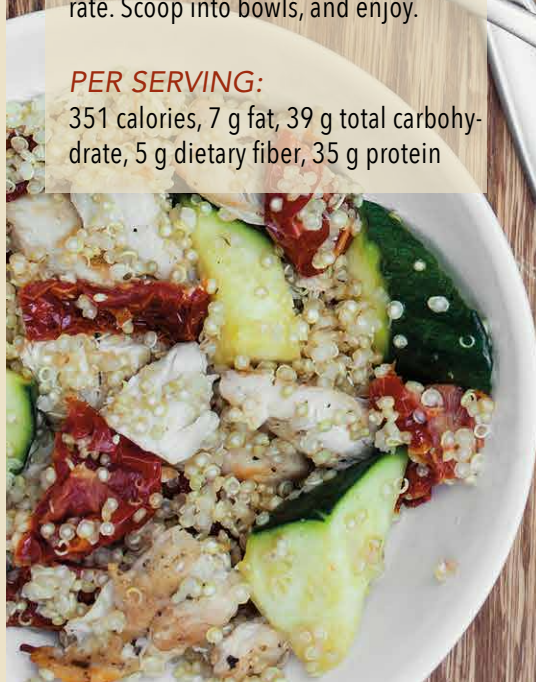
DIRECTIONS:

- Bring water to a boil in a medium saucepan over high heat. Add quinoa, bouillon and garlic, and return to a boil.
- Cover, reduce heat to low, and set timer for 20 minutes. After 10 minutes have gone by, stir in chicken, zucchini, sun-dried tomatoes and basil, and cover again.
- With 2 minutes remaining, remove lid and stir again. Leave pot uncovered to allow any remaining water to evaporate. Scoop into bowls, and enjoy.

PER SERVING:

351 calories, 7 g fat, 39 g total carbohydrate, 5 g dietary fiber, 35 g protein

25 MINUTES
4 SERVINGS



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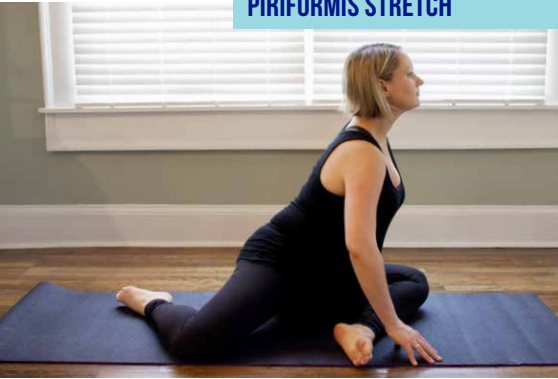
CAT/COW POSE (FOR LOW BACK)



1. Kneel with your hands directly under your shoulders.
2. Round your spine like a cat and let your head hang toward the floor (see photo).
3. Gently arch your back and gaze at the ceiling.

If arching your back causes ANY discomfort in your abdomen, stop immediately!

PIRIFORMIS STRETCH



1. Sit with your knees bent and your feet on the floor.
2. Place your hands in front of you.
3. Cross your left ankle in front of your body and extend your right leg behind you, keeping your knee bent (see photo). Hold for 60 seconds.

Repeat on the other side.

CALF STRETCH



1. Kneel with your hands directly under your shoulders.
2. Extend your right leg behind you and curl your toes under (see photo).
3. You should feel a stretch in your calf.

Hold for 30 seconds and repeat on the left. Stretch each leg three times.

SIDE LUNGE (FOR INNER THIGHS)



1. Squat down on the balls of your feet with your heels lifted.
2. Place your hands directly in front of your chest on the floor.
3. Stretch your right leg out to the side, placing your heel on the ground (see photo).
4. Flex your toes back toward you (see photo).

*Hold for 60 seconds.
Repeat on the left side.*

ASK Dr. Shannon

BY SHANNON McBRIDE

PHOTOS PROVIDED BY AND
DEMONSTRATED

BY SHANNON McBRIDE

Last month's column presented four upper body stretches for pregnant women that can be performed before and/or after swimming. This month, Dr. Shannon demonstrates four lower body stretches.

Swimming is one of the most highly recommended forms of exercise during pregnancy. Its benefits include being low impact and making pregnant women feel weightless.

Cardiovascular exercise is very important during pregnancy because it helps bring oxygen to the placenta and baby, and it improves circulation. Swimming decreases back pain and increases muscle tone and endurance.

As with any exercise, it is important to check with your OB/GYN or midwife before starting to swim while pregnant. ❖

MEET YOUR TRAINER

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.

SUE CHEN

BY MICHAEL J. STOTT
PHOTO BY RICK RENYER,
MACHINE AQUATICS

After 21 years at Rockville-Montgomery Swim Club, Sue Chen has taken her “quality-over-quantity” mindset to Machine Aquatics, where she continues to develop nationally ranked age group swimmers.

Q. SWIMMING WORLD: How did you get started in coaching?

A. COACH SUE CHEN: I always loved the process of swimming, even as a little kid. I loved working hard and seeing my times improve in practice. I was blessed with great coaches throughout my swimming career, but the biggest influences were Paul Hornsleth (Malvern Prep) and Mary Gardner (Bloomsburg University of Pennsylvania). They made me understand the importance of coaching kids and how you can influence them in a positive light.

SW: You learned a lot about technique and motivation through observation. Any other influences?

SC: I learn from every coach with whom I come in contact. Kate Lundsten (Aquajets), Rachel Stratton-Mills (AGUA), Allison Beebe (FCST) and Jaime Lewis (Gator Swim Club) are all coaches that I connect with regularly and discuss coaching issues. I consider Eddie Reese the best in the business, and I learn a lot from him as well. Jim Williams (RMSC) and Geoff



PICTURED > SUE CHEN (RIGHT) WITH MORGAN HILL (FEATURED IN “HOW THEY TRAIN,” PAGE 41)

Coach Sue Chen

Head Site Coach
(University of Maryland)
Machine Aquatics
College Park, Maryland

Sue Chen (Bloomsburg University, B.A., economics with a concentration in philosophy, '86), admits she was “never a national-caliber swimmer,” but her coaching career has achieved advanced status. Starting with YMCA swimmers and triathletes, she spent 21 years with Maryland powerhouse Rockville-Montgomery Swim Club before moving to Machine Aquatics in April 2013. From 2000-12, she was an eight-time USA national junior team coach, helping swimmers attain more than 300 national top 16 rankings. She is currently a USA Swimming national team coach, head of the women’s National Select Camp and has served on the staff for the Youth National Team in Vancouver, Canada; NCSA All-American team in Dublin, Ireland; and the World Youth Games in Lima, Peru. She is also co-owner of the iSwim Clinic, LLC, which teaches children proper stroke mechanics through video analysis.

Brown (NOVA) have been my biggest coaching mentors.

SW: RMSC’s Dave Kraft says you were a huge influence on him.

SC: Dave and I balanced each other very nicely on deck. He is a coach driven by practice holds and base times. He learned from me that every swimmer is different and you have to find a way to coach them as individuals.

SW: How do you go about being a role model for young women?

SC: I love talking to them and helping them succeed in following their dreams. Being open and honest is the key.

SW: You are involved in USA Swimming Women’s Leadership Program.

SC: The USA Women’s Leadership Program is designed to address gender inequity and other issues that hinder female swim coaches from rising to an elite level. We are still in the beginning phase of the program. My role is to offer advice to the younger coaches and be a mentor throughout the year—not just at our conference.

SW: When you first began coaching, you were often mistaken for a swimmer. How have you become recognized and respected for your coaching accomplishments?

SC: As I got older, I started to gain more confidence. That shows when I am on deck with the swimmers and talking to the parents. I don’t need to prove myself to anyone now that I am hitting 50 this year. I am OK with who I am.

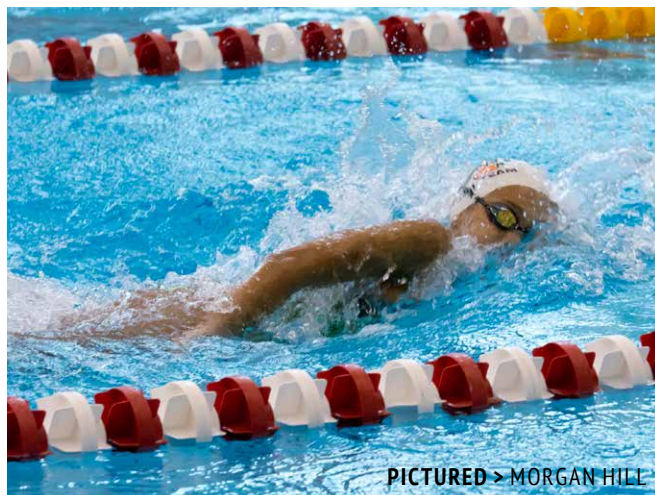
SW: Are you still viewed as a men’s coach?

SC: I hope it has changed. I have coached a lot of female swimmers starting with my first national junior team member, Kassy Kugler, back in 2000-02. The bottom line is I need to coach all my swimmers the best I can.

— continued on 42

HOW THEY TRAIN:

BY MICHAEL J. STOTT



PICTURED > MORGAN HILL

MORGAN HILL

PHOTO BY RICK RENYER, MACHINE AQUATICS

Morgan Hill, 15, is a multi-sport athlete with a body for swimming—5-8, 125 pounds, wide shoulders, small hips and strong legs—and she's a tremendous kicker! She followed her Rockville-Montgomery Swim Club coach, Sue Chen, when Chen joined Machine Aquatics last year in April.

"Morgan is a very mellow swimmer," says Chen. "She never lets a swim get her too high or too low, and she has a great perspective on the sport. Her greatest asset is her ability to hear me talk to her—even when I get angry—and not take it personally. She and I have a great relationship, and it all comes from communication. Morgan responds well to being pushed by the coaches and the other swimmers. At the end of the workout, she leaves everything in the pool."

SAMPLE SETS

(All sets are after 2,400-3,000 warm-up)

SET 1

6 rounds (SCY):

1 x 50 kick

1 x 75 kick

1 x 100 kick

1 x 75 race swim with emphasis on kick

1 x 50 kick

COACH CHEN: "Everything is on the same interval. Morgan's interval is 1:08. The set is great because it starts out easy, then goes from a 1 x 100 kick on the 1:08 to a 75 race swim. The key is to get the legs moving on the 100, get a little fatigued, then push on the 75 swim. Morgan does flutter kick with a board for this set."

SET 2

4 x 10 x 50—all back half 100 speed on the 1:10 (SCY) or 3 x 10 x 50 (LC) on 1:15

COACH CHEN: "After each set of 10, there is a 300 warm-down. The key is consistency on all of the 50s. Morgan races each set while concentrating on the details of racing—push-offs, breathing, driving into her walls and always finishing with a fully extended body. She does freestyle on three sets in short course yards and two sets when long course. The other sets she does butterfly."

SET 3

40 x 25 underwater dolphin kick race

COACH CHEN: "Each one is from a dive, so she has to get out of the water and walk around to the starting blocks to start each 25. There is no interval. The swimmers have 45 minutes to get the set finished. Morgan will keep her 25 times for the dolphin kick around 12.4 seconds."

SET 4

3 rounds:

2 x 75

build to race

1 x 100 easy

1 x 125 race from a push

Hill does all freestyle, and her goal times are:

Round 1 - 1:12

Round 2 - 1:08

Round 3 - 1:06

"Morgan has yet to make the 1:06 goal time, though I believe she will do so in October, the next time she will do this set. She has attained the 1:08 goal time with a 1:07.9," says Chen.

2 x 75 easy

1 x TBD swim (based on results from the 1 x 125 swim)

Round 1: if she makes her goal time—150 for time; if she misses her goal time—200 for time

Round 2: makes goal time—100 for time; misses goal time—200 for time

Round 3: makes goal time—50 for time; misses goal time—200 for time

COACH CHEN: "The greater the challenge, the greater the reward."

• • •

"As an outstanding student, Morgan will have a lot of choices when she starts thinking about colleges next spring," says Chen. "She has a lot of goals to accomplish in the next two years with making the national junior team at the top of the list. It is amazing what that experience does for swimmers. The motivation you get to continue to excel is incredible. The camps and the experience at the OTC will last a lifetime, and so will your friendships." ❖



TOTAL ACCESS MEMBERS CLICK HERE

to learn more about Morgan Hill as well as her progression of times.

SW: Twenty-one years with the highly successful Rockville-Montgomery Swim Club—why the change?

SC: RMSC was great, and I loved being on that team while I was raising my family. It was time for a change, and Paris and Dan Jacobs at Machine are incredible. Their values on life, family and swimming are the same as mine.

SW: How have you grown the University of Maryland site?

SC: One swimmer at a time! Being at UMD, the perception is that we are very serious about swimming and maybe too competitive for some families. People need to understand that we coach all levels.

SW: How were you able to adapt Jack Conger's swim program to his physical growth?

SC: Just like we do with any other swimmer: watch, learn and communicate. Jack knows his body very well, and he can communicate what feels

right, wrong and strong.

SW: What do you and Eddie Reese discuss concerning Jack?

SC: Most recently, we talked about Jack's season plan for the summer—basic training ideas and critical focus points. Jack and Eddie have a great relationship, and I understand that we all need to be on the same page throughout the summer.

SW: What was it like to be a member of the U.S. national coaching staff for the Youth National Team in Vancouver?

SC: Missy Franklin and Tom Shields were on that trip as members of the USA national junior team. It was my first trip as a coach on the USA staff. It was an eye-opening experience. The USA staff was incredibly organized under Jack Roach. They had everything covered to make the travel and the meet perfect for the swimmers and coaching staff. Listening to Jack Roach speak to the swimmers and coaching staff. Listening to Jack Roach speak to the swimmers was one of the best moments of my swimming career. He really has a way with words,

and he motivates kids big-time!

SW: What was the value for NCSA All-Americans you took to Dublin in 2010?

SC: Learning how to travel is so important for the swimmers. Time zone changes, different food, different people—learning how to cope with change is crucial.

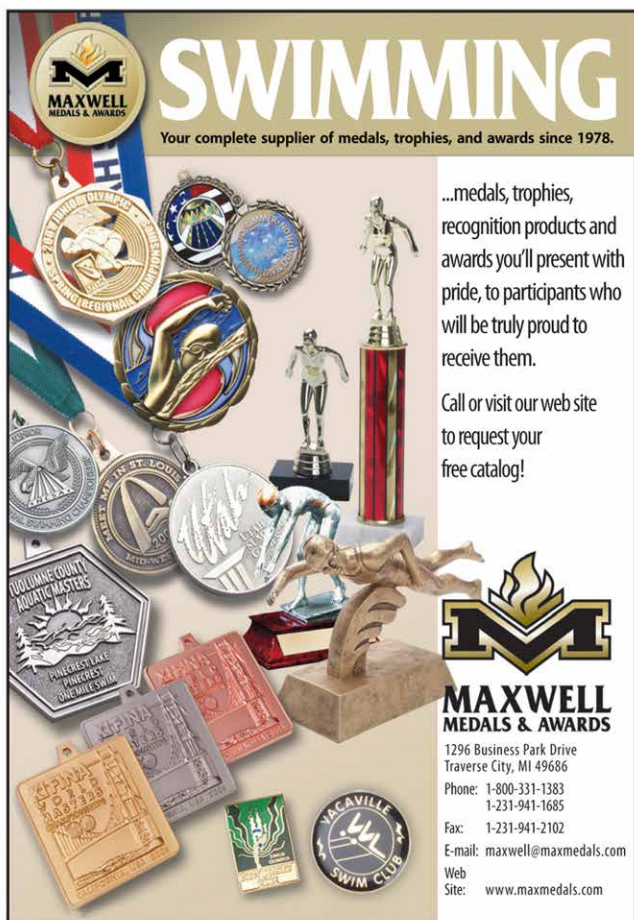
SW: You also coach children and adults with special needs.

SC: I started about five years ago. It is the highlight of my week. These people are incredible. I have learned a lot about myself in the process. One of my goals is to set up a country-wide campaign to teach children and adults with special needs. ❖



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to read more Q & A with
Coach Sue Chen

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



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FUND RAISING:

SHOW ME THE MONEY!

Swimming World recently spoke with Paul Smith, coaching director and CEO of the Mesa Aquatic Club in Arizona, about how he has been able to guide his team into becoming one of the most successful in the country.

When Smith first accepted the job at Mesa in April 2009, he left a successful career in sales. One of the first things he did was to include in his mission statement, “Mesa Aquatics will host meets as its primary way of fund raising for the team.”

bership. The club provides a scholarship fund for committed athletes who need financial support in order to swim.

It’s true, though, that not all clubs have the facilities to host championship meets nor the membership numbers to offset their costs. If that’s the case, Smith recommends that clubs come up with creative ideas for fund raising, being careful of the club’s image when setting up a fundraiser.

HAVING A LOCAL OLYMPIAN AS A GUEST SPEAKER AT YOUR CLUB’S GALA AND SILENT AUCTION IS A GREAT FUND-RAISING IDEA. OR MAYBE HE OR SHE COULD HELP HOST A SWIM CLINIC (AS SHOWN HERE WITH JOSH DAVIS)!



[PHOTO BY ANDREA NIGH]

Since then, Mesa has hosted some of the most successful meets to date, including the IMX Games, USMS National Championships and the recent Arena Grand Prix when Michael Phelps made his official return to the sport.

Smith credits a lot of his success to the volunteer force that he has from the club’s families, keeping in mind that help is needed in order to be successful.

He is also not afraid to ask for help: “If you’re not willing to ask for anything, then you will never get anything in return. Just ask!”

At Mesa, monies that are raised first go back to the club and its mem-

Here are just a few ideas to get started:

USA Swimming’s Swim-a-Thon. This is the No. 1 way to raise funds for a swim club. The entire team can participate, and it can be done as a team function. Teams can raise from \$10,000 to \$50,000. The best part of doing a Swim-A-Thon is that USA Swimming will provide the resources needed to make sure that it is successful.

Local Restaurant Incentives. Partner up with a popular local restaurant in which a portion of the day’s purchases helps to support the swim team.

Rummage Sale. This is a great ac-

BY MAUREEN RANKIN

Finding ways to make money for a swim club has always been difficult. However, clubs—big or small—can learn how to become financially successful simply by looking at some of the most financially sound and successful teams in USA Swimming.

tivity to get everyone involved. Have family and friends donate items for the sale, then have a team day. All of the money raised can go directly to the team.

Bake Sale and Cookbook Sale. This can be done in conjunction with the snack bar sales at a swim meet. Baked goods are donated, and a cookbook is created based off of the items sold. Often families have special recipes that they are willing to share. All proceeds would go back to the team.

Golf Tournament. This fund-raiser might require some money up front in order to secure the golf course for the day. Depending on the anticipated amount of interest, determine a reasonable entry fee.

Gala and Silent Auction. Again, donations would be required from family and friends. A location would also need to be secured. And a guest speaker is a great idea—a local Olympian certainly would help with ticket sales! (The club may have to spend some money to make some money with this fund-raiser.)

Swim Clinics. Have the club’s own coaches and staff host the clinic. Part of the proceeds could go to the staff (for their time and expertise), with the rest going to the team. ❖

Maureen Rankin, a nine-time All-American swimmer from the University of Arizona and former coach, now swims Masters and is the circulation manager for Swimming World Magazine.

Congratulations HASTY HIGH POINTERS!



Sam Harquail
Age 14

Portland Aquatic Club
Portland, Oregon

Oregon Swimming 11-14 State Championships



Blakely Schuricht
Age 9

Scottsdale Aquatic Club
Scottsdale, Arizona
Cactus Classic



Tristen Ulett
Age 11

Dynamo Swim Club
Chamblee, Georgia

Georgia 14-and-Under SC State Champs



Lorenzo Martinelli
Age 10

Santa Clara Swim Club
Santa Clara, California

Adam Szmidt Memorial LC JO Champs

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UP & COMERS

AGE GROUP SWIMMER OF THE MONTH

BY SHOSHANNA RUTEMILLER

RUBY MARTIN

Fourteen-year-old Ruby Martin is swimming well beyond her years. The Iowa flyer broke the pool record in the 200 meter individual medley at the “Swim Pink” A+ Invitational, June 20-22, at the University of Iowa. She has achieved national times before, but in this case, the pool—being that it was a college pool—has hosted many collegiate swimmers. However, it was a soon-to-be high school freshman that broke the pool record with her 2:19.67.

“When I finished, it was so close, I didn’t even know if I had gotten it,” Martin said excitedly. “There was so much adrenaline running through me. When my coach told me I got it, I was so excited. Having my time on the board was also really exciting.”

Martin’s impressive swim ranked her first in the nation among 14-year-old girls in the event. At the time, she also was the only 14-year-old to have posted a 200 IM time under 2:20. She will go head-to-head with the top 18-and-under swimmers at the 2014 Speedo Junior National Championships, July 30-Aug. 3, in Irvine, Calif., where she will swim a full meet schedule.

Martin has been swimming for the Iowa Flyers since 2011. She trains 10 practices a week, with three doubles sessions. Martin talked about enjoying the “color system” training she does under coaches Robert Pinter and Richard Salhus.

“We have about six or seven colors that are based on your heart rate,” Martin says. “Instead of my coach saying six 50s fast, I just know where my heart rate needs to be. I can check it and know I’m in the right zone.”

Martin hopes to qualify for the 2016 Olympic Trials in Omaha. Short-term, she wants to make the U.S. national team or attend the National Select Camp—just like her favorite swimmer, Katie Ledecky.

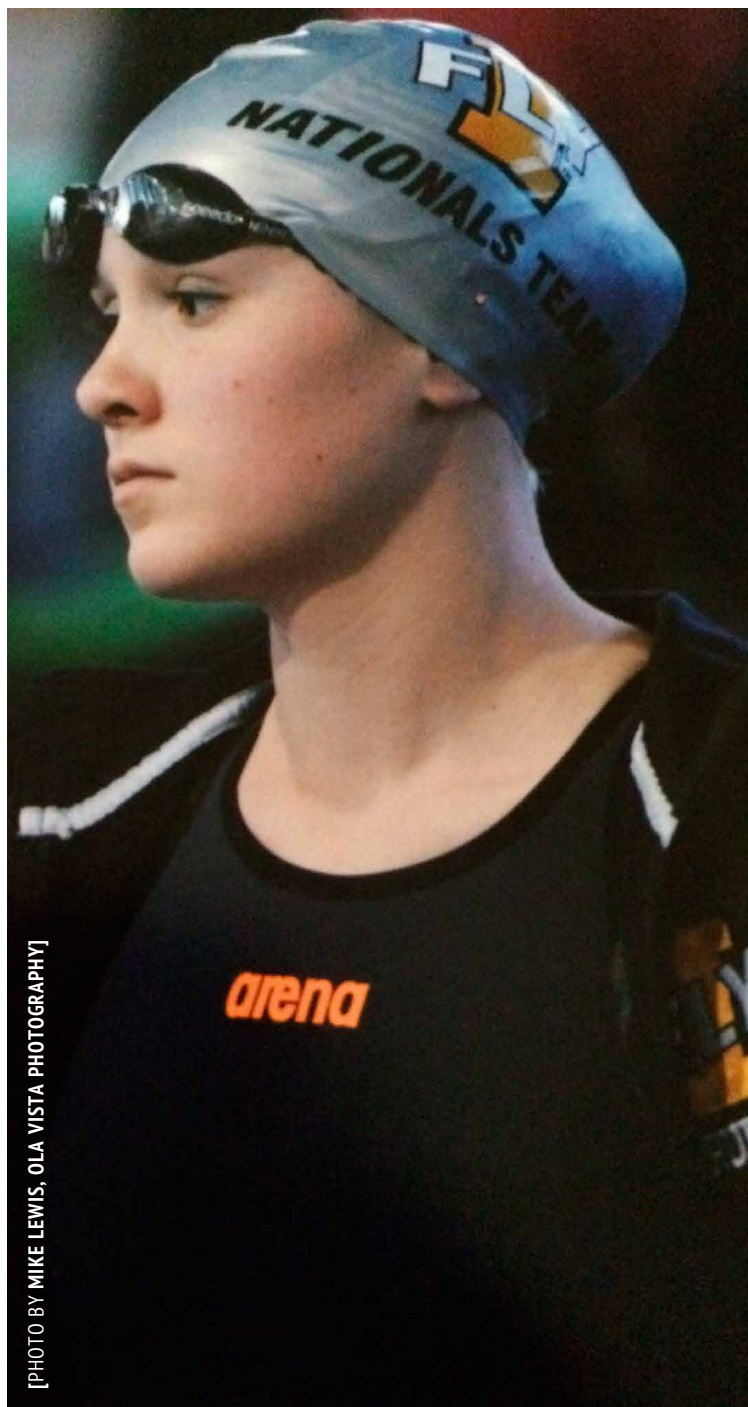
“One person I really look up to is Katie Ledecky,” said Martin. “It’s really cool that she won the gold medal at age 15 and qualified for the Olympic team at such a young age. She’s doing really amazing, and I love watching her swim. I really look up to her.”

For now, Martin will continue doing what she loves best: “getting to train with some of my best friends.”

“Going through all of the hard stuff with them and traveling with them is so much fun,” Martin says. “We all push each other to our goals. Being at swim meets together and cheering on everyone makes swimming fun.” ❖

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[PHOTO BY MIKE LEWIS, OLA VISTA PHOTOGRAPHY]



BY SHOSHANNA RUTEMILLER

Olympian Amy Van Dyken-Rouen injured her spine, June 6, leaving her paralyzed from the waist down. She and her husband, Tom Rouen (former Denver Broncos punter) were riding ATVs when Van Dyken's ATV rolled on top of her. She severed her spinal cord at the T11 vertebra.

The spinal injury was just millimeters away from rupturing her aorta. It appeared so serious that many wondered if she would survive surgery.

Van Dyken, 31, will have to relearn how to perform everyday tasks, such as driving, without the use of her legs. In early July, she was in intensive, daily

rehabilitation at the Craig Hospital in Englewood, Colo. On a positive note, she said she feels occasional sensations in her legs and hopes one day to have complete use of them.

A former world record holder and six-time Olympic gold medalist, Van Dyken was the most successful swimmer at the 1996 Games in Atlanta, where she became the first American woman to win four gold medals in a single Olympics (50 free, 100 fly, 400 medley relay and 400 meter freestyle relay).

In the following months, she was inducted into the U.S. Olympic and

Colorado Sports halls of fame, and was named the Associated Press Female Athlete of the Year as well as the USOC Sportswoman of the Year.

Van Dyken also was featured on the cover of *Swimming World Magazine's* October 1996 issue following her star role at Atlanta. Inside the magazine was Van Dyken's diary from the Olympic Games. Following is an excerpt from Wednesday, July 17, 1996:

"This morning, I went to the pool—feel super! Emery Hill (trainer) was working on my neck (strained earlier in Knoxville), and tons of cameras came

OLYMPIAN AMY VAN DYKEN SUFFERS SPINAL INJURY

The most successful swimmer of the 1996 Olympics in Atlanta learned she would be paralyzed from the waist down after an ATV accident severed her spine at the T11 vertebra.



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to shoot photos. Weird. Someone recognized me by name—it feels strange because I think of myself as just me—not a recognizable sports figure—not that I really am—but it’s the Olympics, and the USA wants to know all of its athletes!”

Van Dyken’s ongoing courageous journey is in the hearts and minds of the entire swimming community. ❖

PICTURED> ABOUT A MONTH AFTER SURGERY, AMY VAN DYKEN SHOWED CONSIDERABLE IMPROVEMENT AND POSTED THIS PHOTO TO TWITTER AND INSTAGRAM WITH THE FOLLOWING MESSAGE: “YESTERDAY I GOT TO STAND UP TO GIVE MY HUBBY A KISS FOR THE FIRST TIME IN A MONTH. #WASNICE #SIMPLETHINGS”

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[PHOTO BY CATHERINE LADD]

PICTURED > SAY CHEESE! ERIC RESS, 23, OF SANTA CLARA SWIM CLUB, GAVE A BIG SMILE BEFORE THE DAY'S COMPETITION STARTED AT THE GEORGE F. HAINES INTERNATIONAL SWIM CENTER IN SANTA CLARA, CALIF., SITE OF THE SIXTH AND FINAL MEET OF THE 2013-14 ARENA GRAND PRIX SERIES THAT BEGAN IN NOVEMBER AND ENDED IN JUNE.