

The JOURNAL

Official Publication of the
National Interscholastic Swimming Coaches Association of America, Inc.



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March - April 2024



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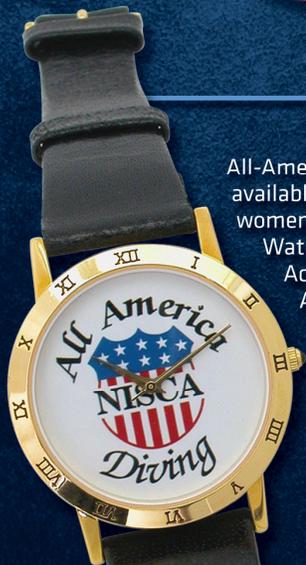


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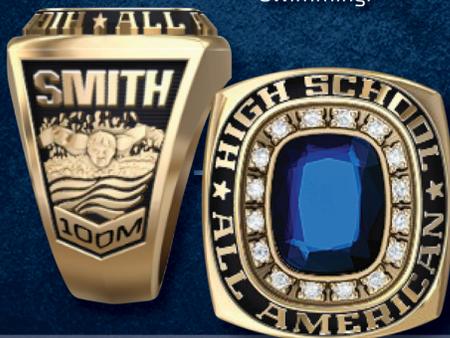
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THE NISCA JOURNAL

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March - April 2024



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Dear NISCA Members,

I am writing this following one of our most recent NISCA Executive Board meetings where we were discussing preparations for the upcoming NISCA Conference. You should be receiving this journal around the time of our annual conference.

In our aquatic sports we often overlook the media outlets and sportswriters who cover our sport so well. At our 2023 Conference in Tennessee, we established our first award to recognize outstanding media coverage of aquatic sports. We are excited to announce that the inaugural recipient of this award is Brent Rutemiller. Brent is the former publisher of Swimming World Magazine, and NISCA has decided to name this award the **Brent Rutemiller Excellence In Media Coverage Of Interscholastic Aquatic Sports Award**. I can think of no other person who has dedicated so much of his life toward covering our Aquatic Sports. As many of you know, our sports frequently only get the coverage they deserve nationally during the Olympic cycles when the country becomes enamored with Olympic Swimming. Our athletes and coaches deserve so much more considering our sport produces more Olympic Medalists than any other sport. NISCA believes there are sportswriters and other media throughout the country which do an amazing job covering Swimming, Diving, and Water Polo, and if we desire to continue to expand coverage of our aquatic sports we need to honor and recognize those in the media who share our passion. There is a form on our website for nominating candidates for this award. After your season, please take a moment to identify a sportswriter or media outlet which has gone "above and beyond".

While I am on the topic of media coverage. I would like to give a shout to our own Dana Abbott who puts together our Journal. His efforts to provide a quality product to our members is mostly a thankless job. We are always looking for stories to share about our amazing coaches and student-athletes. If your team has done any volunteer work to support a local charity or has a unique series of team building/bonding activities, we would love to share them with the membership. Please reach out to our Journal editor with any such stories at nisca.journal01@gmail.com

I hope your season championships have gone well and we look forward to connecting with you. A reminder to submit your Swimming, Diving and Academic All-America Awards before your season deadlines if you wish to avoid incurring late fees.

Sincerely,

Mark Jedow



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FROM THE EDITOR

Team photos. In swim suits, warmups, Sunday-best, casual?

When I was at my first high school job, we did what many of you do: line up at the edge of the pool or in the bleachers, or on, around, or near the diving board. Girls in the front, boys in the back? Taller in back, shorter in front? *Line up by grades?*

So many options...

One year one of the swimmers asked why we couldn't do something different. *"You know what? WHY NOT?"*

So began a yearly quest to find somewhere different, somewhere unique. We were hardly alone in wanting a change of pace. We saw other campus sports posing on a fire engine, in front of the Union Pacific MKT locomotive, a John Deere farm tractor (big deal around here).

But I thought we should be water-related, so we took one by the pond at the Outdoor Learning Center, one at a water-themed mini-golf installation called Mountasia, complete with fountains, waterfalls, and meandering streams. We found a pond/waterfall water feature at a subdivision, and one year when the pool was drained for a few days to replace the aging underground filters, we assembled on the bottom of the deep end, sprawled on the black lines with our kickboards.

The spring before our 1955 4-lane pool was going to be demolished and replaced with a new state-of-the-art "Taj Mahal", we decided to honor our old tank with everyone dressed in their Sunday-best, boys in coats and ties, and the girls in their prettiest dresses. It was a sight to behold!

A short while back I received an email from old NISCA friend Mick Homan in Michigan, enclosing a photo of his boys team which is on the back cover of this Journal. Pretty cool.

I dug around and found a nice story about his team in the school newspaper, "The Laker Anchor", the student-staffed publication of Spring Lake HS in Spring Lake MI. Take a look.



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December 18, 2023: New Coach, New Season

Patrick Goran, Reporter

Boys Varsity Swim Team Takes 1st Place at Opening Meet

The Spring Lake Boys Varsity Swim Team has recently begun its winter season and is reaching high this year.

After only a week of official practice the team took first at the Ludington Relays Meet out of six teams in the Michigan Coastal Conference. In total there were 29 PRs broken over the course of the meet, as well as three state qualifying times achieved.

The team is under the instruction of Mick Homan, a new coach at Spring Lake who has been coaching swimming for over 35 years and is excited to be coaching the Spring Lake team.

"I have never experienced anything like this in my years of coaching," Homan said. "There is so much energy at every practice and it pushes everyone to do better and build up others on the team. Often swimmers will talk to me or Coach Porter about what they can improve on after practice and they are very grateful to have our feedback. I am very grateful to be able to coach such a determined group".

The team is also under the instruction of Brian Porter, who has been coaching Spring Lake's boys swim team for multiple years. The team is led by the captains Johnny Wachter, Nathan Navarre, and Kyle Eacker.

The team also had a recent home meet against Grand Rapids Christian, the fifth-ranked team in the state, and 10th-ranked Otsego. The Lakers won against both teams with an additional 26 PRs with six MISCA cuts.

When Porter was asked what goals they have at the end of the season, he said, "I think we should easily place top six at the state meet. We have so many talented swimmers returning and new swimmers that are improving vastly as well. I am very excited to see how the season unfolds."

Sophomore swimmer Lucas Williams said, "I feel we are a much tighter team this year. We all know each other outside of swimming and that makes a great environment during meets and practice."

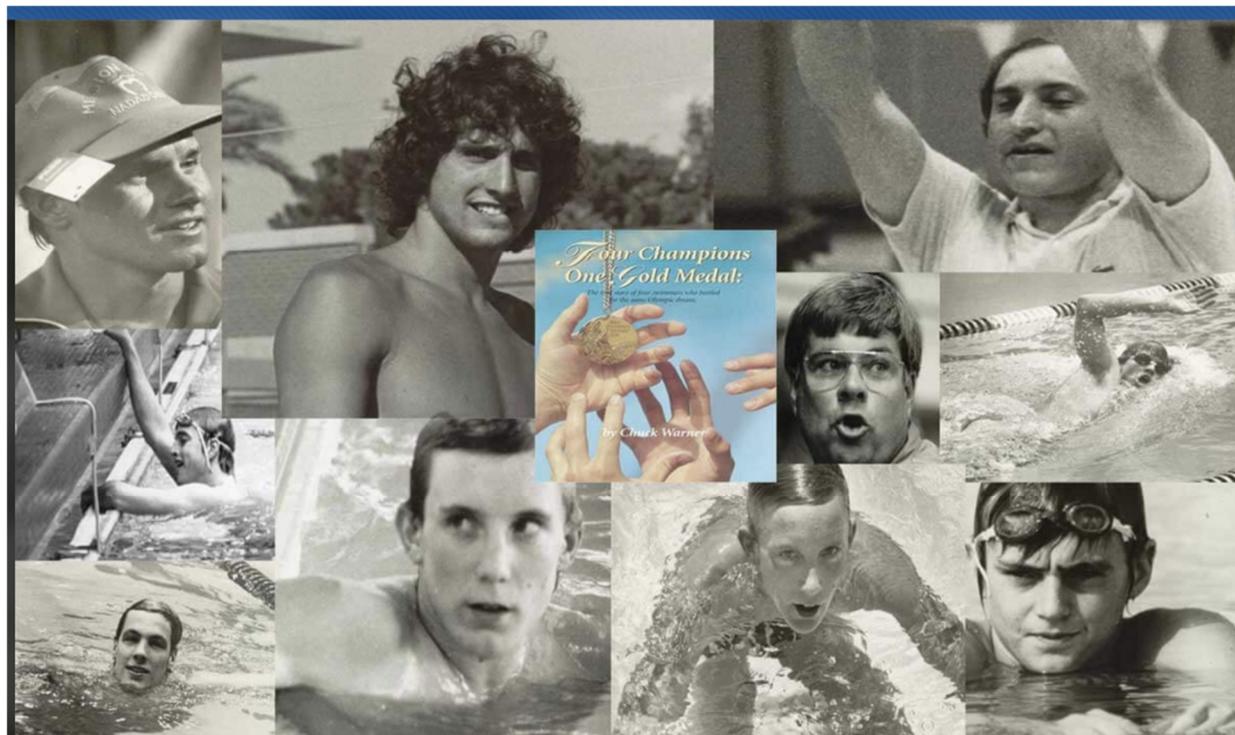
Tyler Nutt, also a sophomore, commented, "We have a lot of potential this year. The new coach has been great and I've really enjoyed the season so far."

Alex Straus, who swam at the state meet last year, added, "We started off the season much stronger this year. We may not have as many people compared to last season but the people we do have are committed and putting the work in and everyone is improving a lot."



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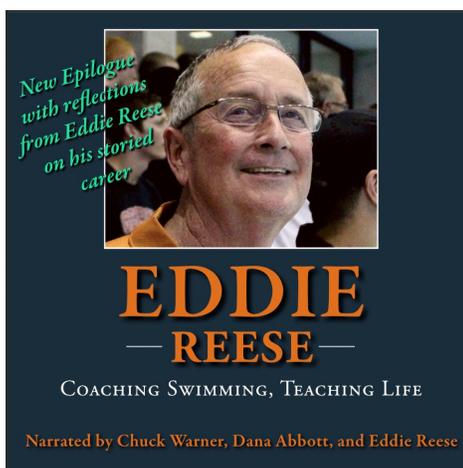


We're going a little crazy counting down the last 30 days of Eddie Reese's college coaching career. Starting March 1, www.chuckwarnerbooks.com is offering a package deal for both the ***EDDIE REESE: Coaching Swimming, Teaching Life*** audio book and the softcover book ***Four Champions, One Gold Medal***, at an incredible **90% off** the Amazon price for both of these books (Amazon: \$244, us: just \$22.45). This is also a **50% markdown** from www.chuckwarnerbooks.com where these two books normally retail together for \$44.90 (Audiobook \$14.95, Four Champions \$29.95).

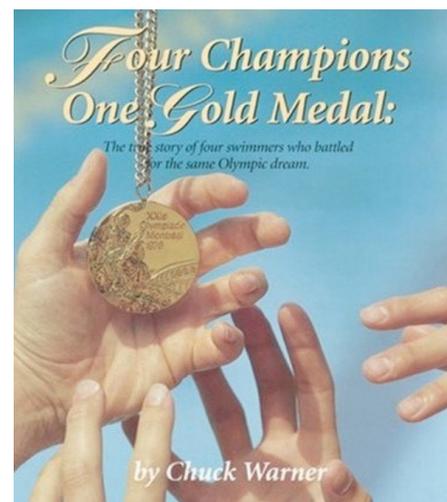
Do you have a "swimming library?" Why not always have access to the Eddie Reese Audio Book on your phone/ computer and dive into one of the best swimming stories ever known, leading up to the 2024 NCAA's?

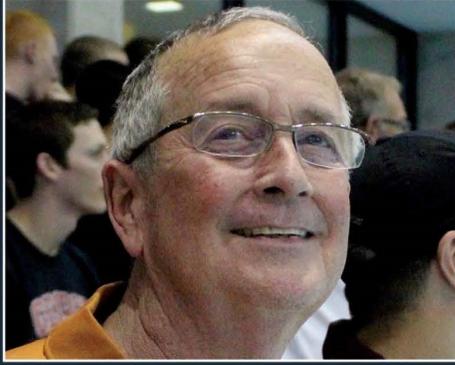
Eddie Reese has said about ***Four Champions***: "Parents, swimmers and non-swimmers can learn some of life's tougher lessons from this book. If you are not connected with *THE SPORT*, just pass over all the numbers and enjoy a special real story about four greats of their time and sport. If you are caught up in the world of swimming, read every word and number and then write these four guys and thank them for what they did."

Former USA National Team Director Dennis Pursley describes ***Four Champions***: "I have read many books on the sport of swimming, but this is the first in the 'can't put it down category' ...a '**must read**' for anyone interested in the health and future of the sport of swimming."



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EDDIE'S LAST HURRAH

The Final Season

A Continuing Commentary...



Scan QR code to go to
"Last Hurrah" Commentaries

Eddie Reese's first season at Texas was 1978-79, 45 years ago. He has announced his retirement following this, the 2023-24 season. The Cambridge Dictionary defines "last hurrah" as a person's final effort after a long period of work. We can't imagine Coach Reese *-totally-* walking off a pool deck, and assume he will continue guiding and imparting wisdom and advice long after he no longer mans the UT helm in Austin, but this will be his final season as the Longhorns' head coach.

The authors are going to follow the 'Horns, meet by meet, and offer commentary after each competition. No one can truly fathom the impact of the genius and humor that has guided Eddie's thoughts and actions if they don't have a deeper understanding and exposure to his entire life, and the best way to do that is to read the book, **EDDIE REESE: Coaching Swimming, Teaching Life**, and one can't *-read-* the book without *buying* the book!

These commentaries are available at
www.eddiereesebook.com/commentary.

Key Insights from Coaching Female Student Athletes

Kevin Pierce

With International Women's Day being the other day it got me thinking about all that I have learned in my career working with female teenagers. Coaching female student athletes in high school has been an enlightening journey, offering insights that profoundly impact my professional and personal life. The experiences shared with these young women have taught me invaluable lessons about empathy, confidence, teamwork, resilience, and mentorship. These lessons are particularly resonant, considering the unique challenges faced by young women in our world today. Here's how these insights have shaped my approach on the pool deck, in the classroom, and at home as a father to a young girl.

1. The Depth of Empathy

Working with female athletes has deepened my understanding of empathy. Young women often face societal pressures that can affect their self-esteem and performance. By creating an environment where their feelings and challenges are acknowledged and addressed, I've seen remarkable growth in their confidence and performance. This empathetic approach has taught me the importance of truly listening and providing a supportive space where young women feel empowered to express themselves. On the pool deck, this means individualizing communication and training approaches to match their emotional and physical needs. In the classroom, it ensures that I'm sensitive to the diverse experiences of my students, fostering an inclusive environment. As a father, it reminds me to nurture a home where my daughter feels heard and valued, reinforcing the belief that her voice matters.

2. Cultivating Confidence

Coaching has underscored the critical role confidence plays in the development of young women. Female athletes often grapple with societal messages that undermine their abilities. By focusing on their strengths and celebrating every achievement, I've learned the power of positive reinforcement in building self-belief. This approach has not only improved their athletic performance but has also had a ripple effect on their academic and personal lives. Encouraging young women to set ambitious goals and believe in their capacity to achieve them is a lesson I carry into every interaction, whether on the pool deck, in the classroom, or at home. It's about providing the tools and support for young women to see themselves as capable, resilient, and worthy of every success.

3. Embracing Teamwork and Collaboration

Team sports offer a unique platform for young women to experience the strength of collaboration. Through coaching, I've witnessed the transformative power of a united team, where each member supports and uplifts the others. This has taught me the importance of fostering an environment where young

women learn to value each other's contributions, communicate effectively, and work towards common goals. These lessons extend beyond sports, highlighting the importance of teamwork in overcoming societal challenges and achieving shared objectives. Encouraging collaboration in the classroom and at home, I aim to instill in young women the confidence to lead, the humility to listen, and the wisdom to collaborate.

4. Fostering Resilience

The journey of female athletes is often marked by unique challenges, making resilience an essential trait for success. Coaching has shown me the importance of framing setbacks as opportunities for growth, encouraging young women to persevere in the face of adversity. This resilience is crucial, not just in sports but in all aspects of life, where women frequently navigate obstacles that test their strength and determination. By championing a growth mindset, I endeavor to inspire young women to embrace challenges, learn from failures, and persist towards their goals, equipping them with the resilience to thrive in an often unequal world.

5. The Power of Mentorship

Finally, my experiences have highlighted the transformative impact of mentorship on young women. A mentor can be a beacon of guidance, support, and inspiration. Through coaching, I've learned the importance of being a positive role model, demonstrating the values of hard work, integrity, and compassion. This mentorship extends beyond the sports field, influencing how I teach, guide, and parent. It's about showing young women that with dedication and perseverance, they can overcome societal barriers and achieve greatness.

Coaching female student athletes has been a journey of mutual growth and learning. These lessons have not only made me a better coach and educator but have also enriched my role as a father. By applying these insights, I aim to contribute to a future where young women feel empowered to pursue their dreams, unbounded by societal expectations, and equipped with the confidence, teamwork, resilience, and mentorship to succeed in all areas of life.

Read more from NISCA Education Chair Kevin Pierce and subscribe to his stimulating and encouraging newsletters here:

<https://kevinpierce.substack.com/>

The Ultimate Swim Taper and Competition Success Recipe

By Dawn Weatherwax, RD, LD, ATC, CSCS

There are many different approaches to preparing for a big competition, but the most important factor in ensuring a successful swim taper is to eat enough. While it may seem obvious, many swimmers underestimate the amount of fuel their bodies need to perform at their best. Swimming is a high-intensity sport that requires a lot of energy, so it is crucial to consume enough fuel to sustain your body throughout the meet or competition.

To help you stay on track, here are some tips and guidelines to follow:

- The muscles need time to recover and repair, so no decreases in fuel units (calories) are needed within the first seven days of a taper for females and 14 days for males for most.
- It is important not to lose weight during this time.
- To ensure you're consuming enough calories, it's critical to eat 4-6 times a day with high-quality protein, healthy fats, and complex carbohydrates every time. Teenage females average 2500-3000 fuel units and teenage males average 4000-4500 fuel units daily. Adults differ depending on many factors.
- Try to consume at least 20-30g of protein minimally 30 minutes before bed or within 2 hours of dinner if eating late, accompanied by complex carbs, fruit, and healthy fats. If young go with ½ that amount.
- Make sure you stay hydrated throughout the day and get enough sodium to maximize recovery and stay properly hydrated. A rule of thumb is to consume half your weight in fluid ounces a day plus 10-20oz of fluids per hour per activity. Athletes need at least 3000mg of sodium a day, and some need more depending on sweat and sodium loss rates.

- To strengthen your immune system, bump up your Vitamin C intake to 500-1000mg 3-7 days before and 2-3 days after the competition. It is also recommended to add probiotics and Vitamin D3 if not already taking them during this time.
- Get enough rest and prepare yourself for the big event.

Here is a sample menu to help you achieve the right balance of proteins, fats, carbohydrates, fruits, and vegetables:

6-9am: Rise and Shine

Start your day with a power-packed breakfast consisting of Kodiak Pancakes, which are higher in lean protein and contain complex carbohydrates. Pair these pancakes with Fairlife Milk, a great source of calcium and additional protein. For healthy fats, indulge in some 88 Acres sunbutter. Complement your breakfast with a plate of blueberries rich in antioxidants.

10-12pm: Lunch

Keep your energy levels high with True Primal Soups, which provide a good balance of lean protein and essential nutrients. Introduce some healthy fats into your diet with at least 1-2T of olive oil. Accompany your soup with some crackers for complex/starchy veg carbs. Finish off the meal with a side of oranges for a dose of vitamin C.

2-4pm: Pre-workout Boost

Before heading out for your workout, energize yourself with Okios Pro or Kite Hill high protein vegan yogurt, a lean protein/dairy source. Peanut butter or seeds to make for a great addition for healthy fats.

Dave's Killer Bagel provides complex carbs to fuel your workout, and a banana or veggie tray offers a refreshing fruit/veg component to your pre-workout meal.

4-6pm: Post-workout Recovery within 30-45 min

After a strenuous workout, replenish your body with a bowl of dried edamame. This vegan-friendly food is a great source of lean protein. To add a crunch, sprinkle some pumpkin seeds to get a dose of healthy fats. Dried cranberries, blueberries and regular Cheerios serve as your complex/simple carbs/fruit/starchy component. You can also add veggies of your choice to this snack.

5-7pm: Evening Meal

For an evening meal, enjoy a delicious and healthy bowl of chicken & rice mixed with veggies, sesame oil & seeds. This dish is a great source of lean protein, healthy fats, complex/starch veg carbs, and veggies such as carrots, green beans, and snap peas.

7-10pm: Evening Snack

End your day on a nutritious note with Daisy Cottage cheese, Fairlife milk or Organic Soy milk again for lean protein/dairy. Walnuts add a crunch and provide healthy fats. Cheerios, a complex/starchy veg carb, can be a comforting end to your day. Looking more for a warm, healthy dessert, enjoy a Berry-anana Crunch Delight Cheerios Compote, contains frozen or fresh fruits of choice or banana, blueberries, and unsweetened cranberries. This not only satisfies your sweet tooth but also provides you with essential nutrients and antioxidants. It takes no longer than 2 minutes to put together!

Summary

Giving your body time to recover after a workout or competition is crucial. Not only does it help prevent injury, but it also enhances performance and reduces muscle soreness. Keep in mind that there is a specific time window and mixture necessary to maximize the benefits of the post-workout recovery process.

When in doubt, consider seeking the advice of a Sports Dietitian who can guide you in achieving your recovery goals.

MENU

<p>6-9am</p> <p>KODIAK PANCAKES Lean Protein-Kodiak & Fairlife Milk Healthy Fats-88 Acres sunbutter Complex/Starch Veg Carb-Kodiak Fruit/Veg-Blueberries</p>	<p>10-12pm</p> <p>TRUE PRIMAL SOUPS Lean Protein-True Primal Soups Healthy Fats-Olive oil Complex/Starchy Veg Carb- Crackers Fruit/Veg-Soup & Oranges</p>	<p>2-4pm-pre</p> <p>OKIOS PRO Lean Protein/Dairy-Okios Pro Healthy Fats-Peanut Butter Complex Carbs-Dave's Killer Bagel Veg/Fruit-Banana/Veggie tray</p>
<p>4-6pm-post</p> <p>EDAMAME Lean Protein/Vegan-Edamame Healthy Fats-Pumpkin seeds Complex/Simple Carbs/Fruit/Starchy-Dried Cranberries & edamame Veg-optional</p>	<p>5-7pm</p> <p>CHICKEN & RICE WITH VEGGIES, SESAME OIL & SEEDS Lean Protein-Chicken Healthy Fat-Sesame Oil Complex/Starch Veg Carb: Rice, corn Veg- Carrots, green beans, snap peas</p>	<p>7-10pm</p> <p>BERRY-ANANA CRUNCH DELIGHT CHEERIOS COMPOTE Lean Protein/Dairy-Okios Pro Healthy Fats-Walnuts Complex/Starchy Veg Carb-Cheerios Fruit-Banana, blue & cran berries Takes ONLY 2 Minutes!</p>

Dawn Weatherwax's Sports Nutrition Academy

BREAKFAST 6-9AM



Kodiak 15-20g protein pancake mix
Fairlife milk
88 Acres sunbutter
Blueberries
16-32oz fluid





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Dawn Weatherwax's Sports Nutrition Academy

LUNCH 10AM-12PM



True Primal Soups
Olive oil
Crackers
Oranges
20-24oz fluid





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PRE/AFTERNOON 2-4PM



Okios Pro
Peanut Butter/Ranch
Dave's Killer Bagel
Banana/Veggie tray
20-24oz fluid





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POST/WITHIN 30 MIN 4-6PM



Edamame
Pumpkin seeds
Chex/Cheerios
Dried fruit/cranberries
20-24oz fluid





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SUPPER 5-7PM



Chicken & Rice
Sesame oil
Mixed Veggies
Garlic & Seasonings
20-24oz fluid



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Dawn Weatherwax's Sports Nutrition Academy

EVENING SNACK 8-10PM



Cheerios
Frozen bananas, berries,
unsweetened cranberries
Walnuts
Chobani/Okios/Kite Hill
10-12oz fluid/Sodium




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Dawn Weatherwax's Sports Nutrition Academy

References

- Brown, M.A.; Stevenson, E.J.; Howatson, G. Whey protein hydrolysate supplementation accelerates recovery from exercise-induced muscle damage in females. *Appl. Physiol. Nutr. Metab.* 2018, 43, 324–330.
- Burke, L.M.; Shaw, G. Chapter 50 Swimming. In *The Encyclopedia of Sports Medicine*; Wiley: Hoboken, NJ, USA, 2014; pp. 607–618.
- Huang, W.C.; Chang, Y.C.; Chen, Y.M.; Hsu, Y.J.; Huang, C.C.; Kan, N.W.; Chen, S.S. Whey protein improves marathon-induced injury and exercise performance in elite track runners. *Int. J. Med. Sci.* 2017, 14, 648–654.
- Martínez-Sanz, J.M.; Menal-Puey, S.; Sospedra, I.; Russolillo, G.; Norte, A.; Marques-Lopes, I. Development of a sport food exchange list for dietetic practice in sport nutrition. *Nutrients* 2020, 12, 2403.
- McMahon, G.; Thornbury, A. Ingestion of Carbohydrate Prior to and during Maximal, Sprint Interval Cycling Has No Ergogenic Effect: A Randomized, Double-Blind, Placebo Controlled, Crossover Study. *Nutrients* 2020, 12, 2223.
- Moore, D.R.; Camera, D.M.; Areta, J.L.; Hawley, J.A. Beyond muscle hypertrophy: Why dietary protein is important. *Appl. Physiol. Nutr. Metab.* 2014, 11, 1–11.
- Nieman, D.C.; Zwetsloot, K.A.; Simonson, A.J.; Hoyle, A.T.; Wang, X.; Nelson, H.K.; Lefranc-Millot, C.; Guérin-Deremaux, L. Effects of Whey and Pea Protein Supplementation on Post-Eccentric Exercise Muscle Damage: A Randomized Trial. *Nutrients* 2020, 12, 2382.
- Noakes, T.D. Effect of Exercise on Serum Enzyme Activities in Humans. *Sports Med.* 1987, 267, 245–267.
- Saracino, P.G.; Saylor, H.E.; Hanna, B.R.; Hickner, R.C.; Kim, J.-S.; Ormsbee, M.J. Effects of Pre-Sleep Whey vs. Plant-Based Protein Consumption on Muscle Recovery Following Damaging Morning Exercise. *Nutrients* 2020, 12, 2049.
- Shaw, G.; Boyd, K.T.; Burke, L.M.; Koivisto, A. Nutrition for swimming. *Int. J. Sport Nutr. Exerc. Metab.* 2014, 24, 360–372.
- Urdampilleta, A.; Arribalzaga, S.; Viribay, A.; Castañeda-Babarro, A.; Seco-Calvo, J.; Mielgo-Ayuso, J. Effects of 120 vs. 60 and 90 g/h Carbohydrate Intake during a Trail Marathon on Neuromuscular Function and High Intensity Run Capacity Recovery. *Nutrients* 2020, 12, 2094.
- Viribay, A.; Arribalzaga, S.; Mielgo-Ayuso, J.; Castañeda-Babarro, A.; Seco-Calvo, J.; Urdampilleta, A. Effects of 120 g/h of Carbohydrates Intake during a Mountain Marathon on Exercise-Induced Muscle Damage in Elite Runners. *Nutrients* 2020, 12, 1367.
- West, D.W.D.; Sawan, S.A.; Mazzulla, M.; Williamson, E.; Moore, D.R. Whey protein supplementation enhances whole body protein metabolism and performance recovery after resistance exercise: A double-blind crossover study. *Nutrients* 2017, 9, 735.



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Building A Better Athlete through Sports Nutrition

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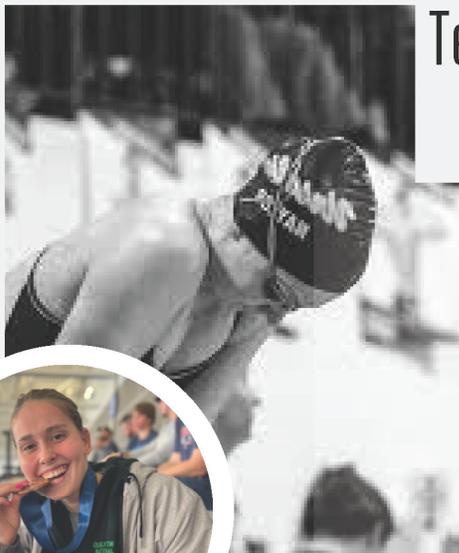


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An Ode to Kicking, Part V

Andrew Sheaff - www.coachandrewsheaff.com

In parts III and IV, we looked at the situations where improving kicking performance could improve swimming performance. We also looked into why kicking should be part of the program, even if it doesn't directly improve swimming performance.

In this article, we'll explore some of the more often-overlooked ways to develop the legs, and why these strategies are relevant. Why kick training has traditionally focused on the cardiovascular element, and rightfully so, we're going to look at how to develop the neuromuscular element.

Training the Legs

Hopefully, we've seen why and when you might want to focus on developing the legs. Now we'll take a look at some of the different strategies for how to develop great kicking.

Train the cardiovascular and metabolic systems

This is type of work most coaches do to develop the legs. Using a variety distances, intensities, volumes, and intervals, coaches have figured out how to train kicking. Where coaches tend to put their emphasis will depend on the training experience of the swimmers, the events they are training for, and the time of year.

Train the muscular system

Regardless of what's being performed, the muscles need to do the work. They need to create force. As such, it's important to spend some time training the kick with higher levels of force.

The best way to do that? Resistance.

The type of resistance is secondary to how the resistance is applied. While most coaches address the cardiovascular and metabolic aspects of leg development, they often fail to address the muscular aspects, whether approached from a force production or a force maintenance perspective.

The muscles need to be conditioned and resistance is an excellent means to do so. As this is an area that's underemphasized, we'll spend a little more time exploring the options.

Force production versus force maintenance

Training exists on a spectrum and kicking is no exception. To fully optimize the development of the legs, swimmers need to train to produce high levels of force and sustain high levels of force. When training for the latter, we'll see higher intensities, higher loads, shorter distances and volumes, and more recovery. In contrast

In both situations, the quality of the work is important. Relative to other aspects of training, high forces should be present. A preference for production versus maintenance should be reflected in the time of year, the events targeted, and the train-

ing experience of the swimmer.

When it comes to this type of work, remember that swimmers can't maintain what they can't produce!

Types of resistance

There are two main ways to create resistance. Resist the body or resist the feet.

Resist the body

Requiring swimmers to kick with resistance against their body is going to overload their legs. Swimmers can kick against cords, power racks, parachutes, towers, wall kick, kickboards held vertically, or whatever else you can come up with. The type of resistance is secondary to how the work is done and the effort that is put into it.

While the type of resistance is not critical, using multiple types of resistance is valuable to reduce training monotony. Especially with kicking, options exist at low cost and they should be utilized as much as possible. Creativity rules here.

Resist the feet

Any strategy that is going to make it more difficult for the foot to move through the water is going to overload the legs in a manner that is distinct from over loading the body. In the former case, it's more difficult to move through the water. In the latter, it's more difficult to move the leg through the water. This creates a different type of overload.

This works well with dolphin and flutter kicking. The exception is breaststroke as there is already a large surface area presented by the entire foot and shin. However, mesh bags (see below) can be effective from a technical perspective, as well as providing a novel stimulus. In this case, GO SLOW to protect the knees and the groin.

Shoes

A cheap and easy way to do this is an old pair of shoes. Bigger is typically better here as more surface area creates more resistance. Very small shoes aren't going to do much to create resistance.

Mesh bags

Dragsox are the commonly known brand, and others are available. Relative to shoes, they are durable and the resistance is standardized. They also are easily stored and less susceptible to the destructive effects of chlorine.

An unappreciated aspect of the sox is that they tend to 'whip' off the end of the feet. This can provide swimmers feedback as to whether they are effectively whipping through their kick.

Fins

Putting fins on the feet affords swimmers the opportunity to move more water with each kick. Taking advantage of this opportunity requires more force. Especially when performed at high speeds, this extra force creates an overload that can strengthen the legs, as well as potentially loosen the ankles. This particularly true of shorter and stiffer fins.

Vertical kicking

Deeper water is 'thicker' or 'heavier' in that it is being compressed and weighted down by the mass of water that is above it. This creates a greater load working through the foot, especially when swimmers focusing on keeping the leg straighter. Vertical kicking can also be done anywhere that has a pool depth over 6 feet.

Combining fins and body resistance

When the opportunity to hold more water is combined with the challenging of kicking against a load, the opportunity for challenging force production. The simplest and most effective way to accomplish this is to add fins to resistance. Combinations such as fins and a parachute, fins and a cord, etc. work well.

Leg-Loaded Swimming

All of the above strategies can and should be performed while kicking with a board or on the back in isolation. However, it's JUST as critical to perform swimming sets that involve a great leg component. As we explored in PART III, swimmers can't just over-kick to swim faster. However, we can use our resistance tool to overload the legs while swimming with full strokes.

Performing sets where swimmers are expected to swim with resisted feet can create a great overload on the legs while retaining full stroke mechanics and rhythm. Beyond that, coaches can use their creativity to develop training sets that combine both kicking in isolation and kicking overloads that are integrated into full stroke swimming. This is particularly effective for helping swimmers learn how to sustain their kicking and stroking rhythm and timing while experiencing significant lower-body fatigue.

All of the principles above can be applied to leg-loaded swimming sets.

Flexibility

For the most part, coaches have the training part down, with some room for improvement in the muscular side of development. However, one of the best methods for improving kicking is increasing mobility of the ankles. And very few coaches systematically address it.

Great kickers have great ankle mobility. This is known, yet it is rarely addressed in training. Changes in ankle mobility can be facilitated if addressed over time. However, caution must be used as the ankles are fragile joints. When working to improve ankle flexibility start with VERY low intensities and volumes, paying equal attention to the volume and intensity of kicking in

the pool. Too much total load is going to cause problems.

As important as improving mobility of the ankle is, ensuring that strength is developed through the full range of motion is critical as well. This must be addressed on land as well. Strengthening the ankles through dorsiflexion and plantarflexion is critical. Fortunately, this requires little equipment to do so, and swimmers can also provide manual resistance to each other, which works very well for mobility as well. A simple internet search will give coaches practical information about manual resistance that can be used immediately.

Attention should be paid to strength and mobility through the lateral and transverse planes as well, although they are much less critical for swimming performance. All of the above considerations have been further addressed in the Going Dry series LINK DRY.

Conclusion

The legs need to be fit, and they need to be fit in a comprehensive manner. In the past, we've focused on cardiovascular and metabolic fitness, and rightfully so. That performance thread needs to continue to be developed. In addition, we need to begin to address the neuromuscular component, as well as address ankle flexibility. It is not about replacing one type of training with another, they need to be added. This is will develop leg fitness that is most likely to result in fast swimming.

In part VI, we'll look at kicking better.



Photo by Taylor Brien, Swimming World Magazine

An Ode to Kicking, Part VI

Andrew Sheaff

www.coachandrewsheaff.com

We've explored the rationale for including kick training, and we examined ideas for improving the fitness of legs here. Of course, there's more to kicking than just fitness. SKILL matters as well. Unfortunately, there has been VERY little attention given to how swimmers kick. The intention of this article is to provide some insight into how kicking can be taught with the same focus as full stroke swimming.

Skill

If the importance of ankle flexibility is often ignored, then timing and skill are not even considered. Fortunately, improving in these areas is not that complicated if coaches are willing to take the time and effort to make change. If they believe it is important, they will convince their swimmers it is important, and change will happen.

There are two critical components to kicking effectiveness-

1. Kicking with a whip-like action
2. Timing to facilitate hip rotation.

If swimmers can accomplish both of these goals, their swimming is going to get a lot better by integrating effective kicking actions.

A quick explanation

We're exploring timing and skill AFTER training and flexibility for a reason. It's important that training and flexibility are addressed in conjunction with kicking skill and timing. Fit and strong legs are going to be better able to make technical changes. More importantly, the legs are going to need to be fit to withstand the amount of practice that's required for change.

Further, the muscular component of kick training is also a great context for creating technical change. The feedback swimmers get will be magnified AND we can speed the development of the strength changes that will be needed to kick in better ways. The muscular contributions will be different with new kicking styles.

All of these changes will be easier with more flexible ankles. If swimmers do not have any flexibility in their ankles, it's much more difficult to kick with a whipping action. Swimmers are almost required to kick through the knees. Take a look at any struggling triathlete, and you'll see this play out.

With better physical function, we'll get smoother skill acquisition.

Learn the Whip

Many swimmers simply bend the knee and kick from the knee. In both flutter and dolphin kicking, a great kicking action is going to start from the hip and whip or wave through the leg down to

the ankle. Helping swimmers learn how to do this can have a tremendous impact on the leg contribution to swimming.

Here are some ideas about how to do this. Some may click right away, some might click after some practice, and some might never click. Know what you're looking for and figure out what gets the change from the swimmer. All of the concepts below apply to both flutter kicking and dolphin kicking.

In general, practicing these skills in isolation (i.e. while kicking) is going to be more effective than immediately trying to make changes within the context of full stroke swimming. Once they get the hang of it while kicking, start introducing it into full stroke contexts. It's particularly effective to do this while teaching kick timing, which we'll explore further below.

One of the most effective ways to create change is to find the right environment. What's a great environment?

Vertical kicking

For those learning to change their kicking style, changing the context can be an extremely effective start to the process. Most swimmers have a pre-conceived notion of what kicking is, especially on a board or within the context of a stroke. However, this is not the case with vertical kicking. As most swimmers have had little or no experience with vertical kicking, there is much less technical baggage to 'undo'.

Equality

One of the great aspects of vertical kicking is that the resistance is equal in both directions. This can allow swimmers to feel moving the legs with similar range of motion during the downkick and the upkick. Most swimmers fail to kick backwards from the hip, and instead bend and kick from the knee. This prevents swimmers from kicking from the hip and the kick needs to start from the hip to create the desired kicking action.

The extra resistance on the backwards kick can also serve to preferentially strengthen these muscles, which helps build the capacity to execute these skills.

Visual

When vertical kicking, swimmers can literally watch their legs to get a better sense of what they're actually doing. This can bridge the gap between perception and reality. They can learn how they're feelings and awareness correlate with their actions.

All of the technical ideas explored below are more effective when first introduced in a vertical context. Once understood, they can be applied to more traditional contexts.

Kicking on the back

Similar to vertical kicking, kicking on the back can put an emphasis on the kick behind the body. If the swimmer is excessively bending the knees, they're going to feel the knees breaking the surface. It's also very easy for coaches, and potentially swimmers, to see the problem.

Like vertical kicking, kicking on the back also puts an emphasis on kicking behind the body. These muscles are underused and underdeveloped. It also is an easier context to figure out how to kick from the hips as compared to learning the skill on the stomach.

Some Concepts

When communicating with swimmers, all of the ideas below are different variations of the same concept. The intention is to provide different ways for swimmers to conceptualize what they need to be doing. They shouldn't necessarily incorporate all of the ideas below; it's more about figuring out what creates the desired change.

Kick from the hip

For many swimmers this may feel like a straight-leg kick. This is especially true of the kick behind the body. Kicking backwards from the hip with a relatively straight leg is like loading the whip action. If there is no load, there is no explode. This leads into the next idea.

Straight up kick

Beyond kicking from the hip, focusing specifically on kicking specifically with a straight up kick. This action sets up the effective whip action that we're looking for. If the hip isn't extended, it can't flex, and the swimmer will have to resort to a knee action.

Pretend you're kicking with stilts

There should be a knee bend in the kick as a result of the wave action. However, for those individuals that kick predominantly from the knees, a whipping kick is going to FEEL like a straight leg kick. To help them appreciate what it's going to feel like, have them pretend to kick like they're wearing stilts. This will reduce the ability to kick through the knee and require a bigger hip action.

A bigger hip action and a tighter knee action will contribute to the whipping action we're looking for.

Wave like a ribbon

Ultimately, we're looking for a wave action that starts at the hip and travels down to the ankles. For some of your swimmers, this simple concept will be enough for them to get moving in the right direction. They'll be able to feel the wave, and the image of a ribbon can be very useful in guiding them towards more effective actions.

Whip through the surface

Some swimmers might struggle with the concept of a wave, and respond better to the analogy of a whip. The biggest difference

would be the idea that there is an aggressive finish to each kick. It's important to add the idea that the whip should happen through the surface to prevent swimmers from bringing the feet too high out of the, or kicking too deeply. 'Whipping' tends to promote a better integration of the hip, knee, and ankle, as opposed to a knee dominant kicking pattern.

Snap the transitions

Another way to conceptualize the whipping action is to have swimmers try to snap through the transition. This snapping aspect is a critical component of creating propulsion, and it can also help to create the rotational torque that's critical to timing. As it's difficult to snap the transitions with a knee-dominant kick, this concept tends to move swimmers towards a kick that starts from the hips.

Boil the surface

Boiling the surface tends to steer swimmers towards keeping the kick tight and from the hips. It controls the amplitude of the kick and prevents swimmers from using a knee-dominant action that just slaps the surface. In order to really boil the water, swimmers will need to kick in both directions.

All of these options might work for your swimmers. Or one might work. It's important to be prepared with multiple options because you never know what you'll need to get the desired change.

Moving Forward

Skill matters, and it can be taught. By providing swimmers with the required concepts and environments, they can absolutely achieve better kicking performances. Importantly, because these improvements are the result of better skills, they're more likely to result in improved swimming performance.

It may require a shift in perspective to spend more time and energy on the SKILL of kicking as opposed to just the development of leg fitness. However, the investment is worth it. As we'll see in part VII, better kicking skill can have a big impact on the effectiveness of kick timing, which will certainly enhance swimming performance.



*Katie Ledecky warming up at Rio Olympics
Courtesy Swimming World Magazine*

NFHS SWIMMING COACHES OF THE YEAR 2022-2023

Boys Swimming: Paul Winkeler, Kansas City, Missouri

Girls Swimming: Milton “Butch” Briggs, East Grand Rapids, Michigan

Courtesy National Federation of State High School Associations (NFHS)

The architect of the state’s winningest high school swimming and diving program, Paul Winkeler has won 14 Missouri State High School Activities Association state championships in 22 seasons as the head coach at Rockhurst High School in Kansas City. After earning its first title in 2005, Rockhurst became unstoppable under Winkeler, claiming the next 10 in a row through 2014, as well as three more from 2020 to 2022. Named Coach of the Year a total of 14 times on the state and national levels, Winkeler’s teams have posted a 97-13 record in dual meets during his tenure and have won more than 150 invitationals. Winkeler has mentored 73 all-Americans, 71 academic all-Americans and 40 individual state champions, and has seen nine state records broken by swimmers under his tutelage. In addition to leading the swimming and diving program, Winkeler has coached the Rockhurst hockey team for 22 seasons and the baseball team for 20 seasons. He has been an educator at Rockhurst High School since 1999, teaching Chemistry, Applied Science, Learning Strategies, Astronomy, AP Environmental Science, Math, and Earth Science. During Winkeler’s tenure as Chair of the Science Department, Rockhurst added a Robotics Program and Engineering Program, built an Engineering Lab, a Robotics Lab, added several new classes, and rewrote the science curriculum.

Milton “Butch” Briggs is in his 49th season [*now 50th - Ed.*] as the girls swimming coach at East Grand Rapids (Michigan) High School. He has led his teams to 32 conference titles and 25 Michigan High School Athletic Association (MHSAA) state championships, and he has compiled a career record of 522-65-1. He also coached for East Grand Rapids boys teams for a number of years and claimed 12 MHSAA state championships. Briggs has been honored on many occasions, including Michigan Interscholastic Swimming Coaches Association Coach of the Year 22 times between the girls and boys programs. He also was Michigan High School Coaches Association State Coach of the Year six times and NFHS State Coach of the Year four times. He was inducted into the Michigan High School Coaches Association Hall of Fame in 2001 and the National High School Athletic Coaches Association Hall of Fame in 2011, and he has served in all leadership positions with the Michigan Interscholastic Swim Coaches Association.



Paul Winkeler
Rockhurst HS



Butch Briggs
East Grand Rapids HS

INTERVIEW WITH PAUL WINKELER, by Andy Wilcox

(AW) What inspired you to become a swim coach at Rockhurst high school?

(PW) I've always loved coaching, I have coached many different sports. In terms of Rockhurst, there was a need and I was able to jump in as head swim coach immediately upon my arrival to Rockhurst. Loved it ever since. I think really the bigger question is what inspired me to stay. The boys that I work with each and every day. I've loved the team from the very beginning and I love working with the kids every single day. They have always inspired me to want to continue to do this. I can't imagine my life without doing this job. Really, what inspires me is them - the boys.

(AW) How do you incorporate Jesuit values, such as service and reflection, into your coaching philosophy?

(PW) Both are a foundational part of what we do that have helped develop our program into what it is today. In terms of service it is important because our school reinforces in our young men they do community service together. They are able to look at something that is bigger than themselves. Which is really what a team is all about. When you see them do service together, you see them become stronger as a team. Then they begin doing service to each other; whether it is servant leadership, helping each other out, being there for each other as a solid teammate, in the classroom or even away from the team. I think that is very important. Without service a lot of those things would not happen. In terms of reflection, that is a key element to get these young men to understand how good they can be. It gets them to think. It gets them to think about what they could be doing to be a more effective part of our team. That might be in the pool, on the dive board, in the classroom, whatever it might be. We want them to be able to think about themselves and their context to the team and how they are contributing to the team. Also the ability to achieve what they want to achieve and why they want to achieve it. I think reflection is a big piece of that.

(AW) What strategies do you use to foster a sense of community and teamwork among your swimmers and divers?

(PW) Our whole, entire program, the foundation of our program is built on this being a team sport. They train, compete together, there is no dive team, no swim team. They compete as one together. They have to work together in the classroom to help each other out to achieve their academic goals. Everything is together. I think how we foster a sense of community and teamwork is truly by building the foundation as a team sport. This is not a group of individuals. I don't coach individuals, I coach teams. I want them to work together as a single unit. They need each other. I am convinced that some of these kids, most of these kids, were to go to a pool by themselves and do the kinds of workouts we have them do by themselves

they would fail. It is because they need each other. They have to have each other. Once they realize that they need each other they can use each other as a strength and to make them be an even more effective piece of the team. This is a team sport. How we foster that is by their communication, working together as a single unit, as a lane. They work as one - swimmers, divers, and managers.

(AW) Can you share a memorable moment or achievement from your time coaching at Rockhurst?

(PW) The memories are so thick because of how much these boys mean to me, but also all that we have been through. The alumni we have remain an important part of our program. They are still creating memories together. Then the current team we spend so much time together there are memories every single day. Whether in the classroom, the time we spend together at the pool. Before the season, after the season. It does not matter. It is an important time for us to spend time together. There was a moment that really sticks out that I was really proud of was about 20 years ago. We were in the midst of a championship season and our team captain, Steve Sharp, was really beginning to learn the job and what it took to be an effective leader. He was a breaststroker. At the time we had three young freshman breaststrokers on the team. They were good, but they were not wise. Steve was wise. I'll never forget one day after practice we broke as a team and everyone was getting ready to leave. Steve went over to the three freshmen and said, "You're not done yet, we're gonna work another fifteen minutes on your breaststroke. Tell your parents that you're gonna be here an extra 15 minutes every day after practice working with me." I did not ask him to do this. This was on his own. He put those boys back in the water and they worked. And they worked, and they worked. It paid off because all those kids made it to state and scored points that year. I was so proud to see the outcome of leadership and to see it there in its greatest form and action. I was so proud of Steve.

(AW) How do you balance the demands of academics and athletics for your student-athletes?

(PW) We make sure that our student-athletes know they are students first. The word student comes before the word athlete. I also explain that I am a teacher. I am not the only teacher on the staff. We have other teachers too. We were hired to be teachers. I was hired to teach chemistry, not to coach swimming. And so I have to take care of my academic obligations first before I can move on and take care of my swim obligations. And so the students not only know we support their academic goals in the classroom, we emphasize them. We celebrate our achievements in the classroom. We have been a NISCA "Academic All American Team" for many years. We have Academic All Americans each and every year. That's very

important to us. So I think our athletes know that it is not only something we stress. Without what we do in the classroom, what we do in the pool would not be nearly as important. It is important for them to know that. A lot of these kids, a majority of them, are not going to go on and swim in college. So we have to give them something when they leave our team and go off to their colleges. I hope their understanding of the importance of academics is one of those things they take with them. What I am trying to produce on this team is future members of the community, future fathers, future husbands, businessmen, doctors and engineers. I am not in this to try to produce college athletes. I am in this to produce young men who are going to be good people.

(AW) What techniques do you employ to motivate and inspire your athletes, both individually and as a team?

(PW) I really hope that it is not me that inspires them. It is each other that inspires the team. In a perfect world I am not a factor in this team at all. I have hopefully taught the boys how to lead, how to navigate a meet. How to support one another. How to work as a team with one heartbeat to the point where we as coaches are on the sidelines watching this team work together as one. Coach is all about relationships. That's what it's about. There is no way to go about coaching without a relationship. One of the most important relationships in my life is with that team. From there you have the individuals as well. I'd like to think I have that relationship with each and every one of those kids separately. Relationships take time and investment and I hope that inspires the young men to be the best versions of themselves they can be for each other. They see how much we are putting into the relationship we have with each other. We have to be fully invested in that relationship. That's a very important part of what we do. Without those relationships we are not a team. So, I think relationships really inspire them to really be the best they can be. In terms of team, I hope again it's not me. I hope it is mutual. I think they see the amount of work we all put into this. It is a tremendous amount of work to do what we do at the level we do it at. This is not something that is created by accident. This is something we forge throughout the years to create, grow, cultivate and help evolve. I am hopeful that that aspect of what we do inspires the team to be a better team. It's not about inspiring them to be better, go faster or anything like that, it's about inspiring them to stay fully committed to each other and the team cause.

(AW) In what ways do you prioritize the holistic development of your athletes beyond their performance in the pool?

(PW) It is important to look at these young athletes in the context of their whole being. These are young men that have challenges in the classroom (and achievements). These are young men that have challenges in the social world around them. They are bombarded by pop culture around them and what our world throws at them. So, I think it is important to look at these young men as what they are - they are 15, 16, and 17

year old young men that are trying to find their voice, figure out who they are. They are trying to make decisions in their lives. They are trying to figure out 'How do I make mistakes and rebound and learn from them.' I think that how we support them in a holistic way is looking at them in that context. I can't look at these young men as swimmers or look at them as divers. I have to look at them as young men who are in a world trying to figure things out, trying to work hard in school, and making life decisions. They are trying to build relationships with their peers. When you look at them in that way, you understand their needs a whole lot better. Some days they need a hug, some days they need to just take the day off and talk. Some days they need a phone call about something that is on their mind. It is all about seeing where they are in the world and what they need in their life.

(AW) How do you handle setbacks or challenges, both for individual swimmers and divers and the team as a whole?

(PW) I think it is important, a policy of mine to be honest, and to be transparent with the kids. Also to bring them into the conversation working with them. The best experiences I have had as a coach are the ones with the kids I have worked with, not the ones with. I want to give these young men a voice, I want them to know I value their opinion. How they feel about setbacks and challenges we have had. I also think it is important for them to know that sometimes I do not have all the answers. Sometimes we have to work through things together. I think that is how you build the strongest teams through those setbacks. When I look at them and say, "How are we going to do this?" I do not have all the answers, but I think, "If we have to do this, then we have to do it together." With a voice of love, with a voice of compassion for the other person. We have to do this together. I think that is the best way to not only handle a setback, but to turn it around to positive strengths for this team.

(AW) Can you describe your approach to ensuring the safety and well-being of your swimmers and divers during practices and competitions?

(PW) It's a major priority to me. It is of the utmost importance to me. I am a father. I have three children I have insured to me in my protection 40 plus sons everyday. To make sure they are safe, pushing themselves that remains with safety in mind is very important. It is very important to give them the resources they need to be able to be safe. This includes their nutrition, their needs in the pool, conditions they are under and even what is going on in the area around us. When you look at when we drive the team vans to meets, and I am driving one of them, I look in the mirror and see sons looking back at me. Sons of parents who have told me, "Here is my son, please take care of him." I take that very seriously.

AW) How do you collaborate with other coaches, faculty, and parents to support the overall growth and success of Rockhurst's swimming and diving program and its athletes?

(PW) Collaborating with other coaches is one of the best parts of my job. I love learning. I hope that is what has helped me become an effective coach. I love to look at things from a different perspective, I love talking "shop," I love it when I see something in the water from a student athlete from another team and I go over to that coach and say, "Here's what I saw. I bet they could be faster if they did 'this'". I appreciate that relationship with other coaches, because other coaches have done that for me as well. So, I like the collegial part of being a swim coach. In the end, we are ambassadors for our sport. If all of us are better at what we do and our athletes are better at what they do then our sport will be better. That's what this is all about. Ensuring the future of swimming and diving. One of the things I really enjoy doing is talking to coaches of other sports. I love talking to our cross country coach about how he trains his athletes and the methods he uses. Talking to our track coach any coach at our school that has had challenges and how they worked through those challenges with their team. I talk to other coaches all the time and I really appreciate everything I have learned over the years from so many different people that have taken the time to talk to me. I really appreciate that.

In an email to NISCA, Andy adds: "Paul Winkeler never competed in swimming a day in his life. He knows how to coach."

Andy Wilcox (AW) is the Rockhurst High School Assistant Swim Coach, St. Teresa's Academy Head Swim Coach, and NISCA Missouri State Representative.

Paul Winkeler (PW) is the Rockhurst High School Head Swim Coach and the St. Teresa's Academy Assistant Swim Coach.

They are technically each other's bosses.

This interview was conducted on March 14, 2024, and kindly shared with *The NISCA Journal* by Coach Wilcox.

"Coach Wink" was inducted into the Rockhurst High School Hall of Fame in 2017. His induction citation reads as follows:

Paul may not have graduated from The Rock, but he has earned his blue and white since joining the Rockhurst faculty and coaching staff in 1999. "Coach Wink" took over the reins of the swim & dive program in 1999 with the sport as "a mystery" to him, as [he] had zero experience. So he took what had been considered an individual sport and brought in a team mentality. And the results began to show. In his first years, Rockhurst went from 20th to 8th to 6th to 4th to 5th, before winning the school's first swim and dive Championship, and just the second Kansas City school to ever do so. Following that first State Title in 2005, Coach Wink led his teams to ten more consecutive championships, ending with an unprecedented 11 straight before stepping down as head coach in 2015. He was selected as the Missouri Coach of the Year seven times and produced 17 individual State Champions, along with 14 State Champion relay teams. He also coached 35 All-Americans and 29 Academic All-Americans.



Testing for Home Pool Advantage in Competitive Swimming

Michael Kidd and Shannon Buckley

ABSTRACT

This article tests the assumption that there is a home pool advantage in competitive swimming. Two approaches are used, the initial is to look at large numbers of performances at swim meets to determine if improvements were more often obtained, or more significant in either home or away swimmers. The second approach looked at a more focused group of athletes as they recorded times at home and away meets to determine if better outcomes were observed at one venue type or the other. A number of mean difference approaches were used to compare the groups. Across all groups observed, athletes competing in an “away” status outperformed those in a “home” status by approximately 3 to 1. Unlike sports where home crowds impact officiating calls and provide an advantage to a home team, the levels of objectivity in swimming, combined with the ability to better control the environment and economic incentive for higher away team performance create a situation where there is away team advantage for swimmers, and by extension, swim teams. By understanding the away team advantage in competitive swimming, coaches can better prepare athletes for both home and away meets. Furthermore, coaches can better predict performance and create more accurate seeding models.

Introduction

Does the home field advantage exist for competitive swimming teams? For decades, the swimming community accepted that home teams have an advantage over visiting teams. Factors including having rest, not sitting in a bus or hotel, knowing the nuances of the facility, local superstitions, or home crowd support are believed to provide an edge over visitors.[1-3]

Swim team performance is the aggregation of individual performance, therefore, we will study individual swimming performance, with follow-on modeling to bridge the gap from individual to whole team analysis.

Our objective is to determine if there is an advantage for home or away swimmers and quantify the scope of any advantage. We take two approaches to understand performance differences at home and away pools. The first looks at 33 competitions and over 5,000 swims to determine whether the home versus away status of a teenage, sub-elite swimmer is likely to contribute to an individual’s success; and then quantify the scope of any advantage. The second analysis is a paired examination of two groups of high school athletes, tracking individuals at home and away meets.

Background

As early as 1871 the English Football League recognized that teams were more successful competing at home venues.[4] The phenomenon has been studied at length with observed home winning rates as high as 69.1% in the US Major League Soccer, 59% of NHL games, 58% of Rugby matches, and 57% of American Football. [5] The advantage is also an international phenomenon. Football leagues in Nigeria show upwards of 85% win rates at home.[6] Common assumptions for the advantage include: higher levels of rest for non-traveling players, a familiarity with the specific nuances of one's home location, a psychological boost of playing before a supportive crowd, a heroic tendency to defend one's home, and friendly officiating for home players. [7]

While statistical examinations validate the home advantages, they show several of the causal factors are less impactful than thought. Favored theories of additional rest levels of home teams, and venue specific knowledge show fairly insignificant levels of advantage. [8] What appears to be a common advantage is the home crowd and its impact on officials. [9-11] Most notably, as the level of subjectivity in officiating increases, so does the observed impact of the home crowd. Dense boisterous crowds increase the stress level on officials to make calls friendly to the home team. [12-15] In an evenly matched competition the impact on an official does not even have to be perceptible in order to be impactful. A small number of officiating calls at the margins may impact the games eventual outcome. [16, 17]

While research on home impacts of swimming is difficult to find; there are similar arguments presented. Swimmers tend to form close bonds with their team over shared challenges and isolation within their home pool. Tight social circles often overflow into not only activity at their pool, but also outside. A post-practice pancake breakfast or other rituals may add to the positive feelings athletes have about home location. [18] Coaches argue that there is an advantage to sleeping on one's own bed instead of sharing a hotel room with others the night before a competition and swimmers will attribute prior positive performances to a specific pool, and often perform better at a “favored” location. [19, 20]

Most references to home pool advantage exist in local news outlets with a “home pool advantage” headline or brief mentions in an article. They may cite “powerful” cheering sections that provide a boost to the athletes. [21-23] At the college level, readers start

to see some additional levels of specificity, without scientific backing, in the home pool impacts with coaches going on record with specific point spreads that home pool provides against a specific opponent. [24]

Methods

Data Sources

Most swimming research examines elite athletes. We look at sub-elite athletes in older middle school and high school as they are the majority of the competitive swimming universe.

Summarized in the appendix are results from 33 meets in Wisconsin, Texas, North Carolina, Maryland, and the European Armed-Forces Swim League (EFSL). [25-29] Initially, we look at in-season meets. These were largely dual or tri meets at the high school level, ensuring that we had similar numbers of home team and away team swimmers. Several invitational meets permit assessments of large numbers of performances conducted during an in-season meet. We also captured a number of penultimate season meets. These meets are high-excitement meets, but normally do not have qualifying standards limiting participation as ultimate championships do, and where additional levels of training factors apply.

Most swimmers swam two races per meet with a handful swimming three. To avoid non-independence within our analysis using individuals for multiple data point, we study first-event swims for every swimmer. When they competed in other races in the same meet we captured it as a subsequent swim (with a random selection of a single record for any that competed in 3 races) and performed independent analysis on subsequent swims as validation.

To follow individual athlete's performance in different venues, we assessed specific athletes at multiple competitions. A challenge of this approach is that it is difficult to know how teams rate competitions. A high stake meet may see everyone swimming best events where there is less room for improvement, where a lower stakes meet may have swimmers competing in off events, where they do not swim often and may have more room to make improvements since their last swim. To counter this, we took two separate approaches.

The first was to look at swimmers within the EFSL. They transit Europe for meets, and meets have several teams. There is ample, high-quality competition at any meet; home or away. The second pairwise set observed pre-eminent high school swimming programs competing in the US mid-Atlantic region. The schools' decades-long rivalry makes every meeting a high-importance competition. We tracked swimmers who competed in the rivalry over two seasons and were able to record results in home and away situations at the same time in each season.

Our first paired analysis included 20 athletes (10 men, 10 women) from the EFSL between the ages of 13 and 17 in accordance with minimum sample size guidance. [30] Athletes competed for 7 teams and swam at least two home and two away meets during the 2022-2023 season. Each performed a number of events per meet and we were able to record improvement over past times in an average of 12 individual event performances for each swimmer. The broad geographic size of the league ensured physical distance between home and away meets. Athletes in this group generally fell in the middle 80% of high school athletes from a performance perspective.

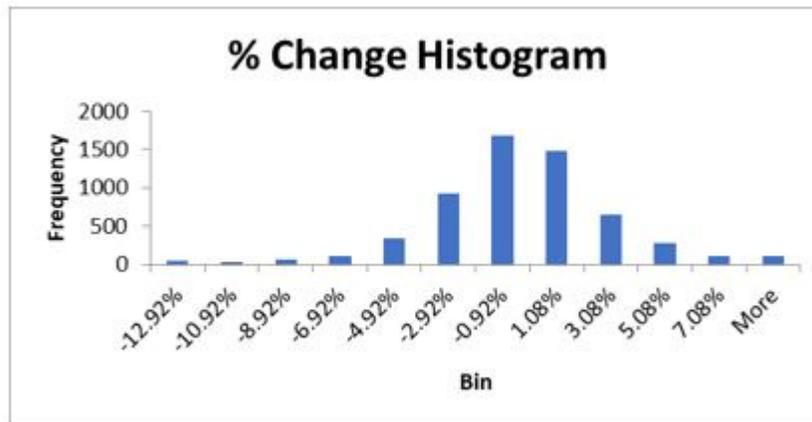
The second pairwise set identified 33 athletes (15 men and 18 women) from the Mercersburg Academy and Peddie School who competed against each other in both a home and away status. These athletes were in the top 50% of high school swimmers.

Data Description

Within the data collected from the above-mentioned sources we recorded and calculated a number of factors in our attempt to understand swimmers' performance:

- Event Length: Distance of the event; distances from 50 yards to 500 yards.
- Event Stroke: Backstroke, Breaststroke, Butterfly, Freestyle, Individual Medley.
- Gender: Men, Women
- Age: Ages range from 12 to 18 years old. We excluded younger swimmers due to extreme time shifts between meets for athletes still in the early stages of swimming careers.
- Early/Late Season: Early season is prior to December 1, and late season after December 1. Breaking the season into early and late categories will help look at any impacts on time drops or gains related to seasonal factors such as tapering or different conditioning strategies.
- Seed time: Seed times populate based on best prior time recorded by that athlete. We did not analyze swimmers who entered into an event without a seed time.
- Final time: Time achieved at the competition. We note Individuals disqualified from races to study disqualification rates.
- Change between times: Percent change between seed and finals time. While not automatically considered to be normally dis-

tributed, the results showed that this variable did approximate a normal distribution with SKEW less than 1, and just slightly heavy tails with KURT between 4.2 and 7.2, depending on the breakdown of swims. Figure 1 also shows a distribution to validate the data's approximation of a normal distribution.



- Best time: Binary, with 1 equal to a situation where the finals time is faster than the seed time, and 0 being where the finals time is equal to, or slower than the seed time.
- Disqualifications: Any swimmers disqualified during an event. This did not include swimmers who did not start a race. We recorded USA Swimming PowerPoints for seed times of disqualified athletes. USA Swimming assigns Power Points to every swim that normalizes performance across age, stroke, distance, and course; allowing fair comparisons between athletes swimming in different events at different times in their careers. [31]
- We calculated natural LOGs of seed and finals times as well as the LOG Difference between the two.

Research Questions

- Does Home/Away status appear to impact performance?
- Does one group obtain best times more frequently than another?
- By how much?
- When we look at individual performers do they perform differently at home and away meets?
- Is there evidence of official bias?

Measurement & Statistical Tests

Before quantifying home pool advantage, we assess if the quality of home/away as a variable. A lack of statistical confidence would cast doubt on the usefulness of Home/Away status as a variable. Initial tests are exploratory, rather than predictive in nature. The data is subject to a multivariate regression analysis with the dependent variable being the binary, "Did achieve a best time" and independent variables being: Stroke, Distance, Gender, Early vs Late Season, and Home vs Away.

Assuming positive results of exploratory test, we will conduct a number of mean comparison tests on various parsing of the data. Initially we will test the percentage of swims to record a 'best time' as defined by having a final time faster than a seed time without consideration as to the size of the difference, and compare the home to away rates using a standard T-Test on both the primary and secondary swims.

Upon a determination that one group achieves best times at a higher rate than another, we test the mean percent change between seeded time and final time for home versus away performances. As previously mentioned the percent change approximates a normal distribution so we conduct a one tailed T-test. Understanding the concerns over general non-normality of percent change. The appendix shows results of a Mann-Wilcox U-Test, and ANOVA to validate mean difference groups. Finally, while we wish to maintain percent change as a variable, due to its ease of communication to the coaching and athlete community, we will also conduct a LOG Difference analysis between seed and finals times and utilize T-tests for mean differences between home and away swimmers. Researchers review all assessments of percent time change, LOG Difference, and best times for men and women to ensure results hold among genders.

Understanding that home advantage relates more to the impact on officials than athletes, we tested for bias by examining rates of disqualification among home and away teams. [32] Additionally, we will look at the distribution of disqualifications among each of the strokes and finally look at the USA Swimming Power Points associated with seed times for each of the disqualified swimmers to

see if there were inconsistencies among the quality of athletes disqualified between home and away teams.

For our pairwise analysis we average and compare performance change from best prior swim between home and away meets. As mentioned above, due to the percent change closely following a normal distribution we will continue to report these results, as they provide more intuitive information to the reader, however we also report multiple mean difference tests as a validation measure.

Results

Does Home/Away status appear to matter when compared to other factors?

Initial testing confirms our assumptions that the fact of swimming as the home team or away team has an impact on swimmer performance. Whether it is a factor of emotional excitement, rest and diet, facility knowledge or some other factor - there appears to be a reasonable level of importance connected with the variable. Bold variables are significant above 99% confidence interval.

- Did Drop = **.86X1 + .0001X2 - .013X3 - .009X4 - .07X5 - .04X6**
- **X1 – Intercept,**
- **X2 – Distance,**
- **X3 – Sex,**
- **X4 – Age,**
- **X5 – Home/Away,**
- **X6 - Early Season,**

The dependent variable was set to “Did Drop any Time” with independent variables being Distance, Sex, Age, Home/Away, and Early/Late Season. From an understanding of the sport, these variables make sense – a short distance race and a long distance race are very different and have different training cycles, early season meets are conducted with fewer practices in the season; it is reasonable to assume that athletes will perform differently than towards the end of the season when they are likely better trained, with additional performances under their belt for the season. Again, we can safely understand that younger athletes will have different performance profiles than more mature peers. New and young swimmers drop significant amounts of time while more established athletes will work all season for improvements measured in tenths or hundredths of a second.

The regression produced high standard error, which is expected when analyzing a broad range of human performance, due to the abundance of individual personal health or training data not available. [30] We will however, continue to look for differences between the home and away swimmers, given the confidence intervals of the Home/Away variable.

Does one group obtain best times more frequently than another?

By every measure, away swimmers record best times at a higher rate than home team athletes. For first swim measures the best times are 69% away, and 62.7% home. For subsequent swims that shifts to 71.6% away, and 63.4% home. First swim away/home percent broken down by sex is 68.8% /62.6% women, and 71.8%/62.6% men. In each case a 1 sided T-Test indicates confidence levels above 95% as indicated in Table One.

[Table One/1 and all subsequent figures/tables will be found at the end of this article after Works Cited - Ed.]

In order to investigate the impact of athletic caliber, we conducted a review of top tier against bottom tier of swimmers whose first event of the meet was the 50 Freestyle, categorizing the groups by gender and seed time. This was one of the larger data groupings by event, and therefore gave a sizable sample with which to work. In all instances we observed similar distributions of away meet swimmers recording more impressive time drops than home team competitors. (High: 1.25% improvement away and 1.12% improvement home, and Low: 1.13% improvement away, and -0.55% improvement home) Similar trends exist, regardless of gender.

By how much?

As is shown in Table One, in the first swim and subsequent swims, the away teams performed better based on the percent improvement over seed time. On average they are showing time drops of nearly three times that of home team competitors. We have seen uniform confirmation of these results based on t-tests, u-tests, ANOVA test, and LOG difference analysis. Further examination of sex differences shows trends that are similar among the away/home differences (Women: -1.1%/-0.6%, Men -1.5%/-0.5%). U-Test and LOG Difference based T-Test validate the mean difference between the sex groups with a greater than 99% confidence.

Is there evidence of official bias?

We observed disqualifications at very low rates. There was no statistically significant difference between the rate for away teams (1.1%) and that of home teams (0.7%). There was very little difference in the quality of swimmers disqualified for the home team (average power point 179) compared to that of the away teams (average power point of 209), indicating that officials were not disqualifying poor swimmers from one team and advanced swimmers from another. Furthermore, the average PowerPoint rankings for

all disqualified competitors were low, with a few outliers disqualified in sprint freestyle events. We assume these outliers are false start disqualifications with little room for referee interpretation. The general population of disqualified swimmers had seed times that indicated that they were lower-performing athletes who it would be reasonable to believe likely disqualified for technical infractions. Figure Two shows the distribution of disqualifications among strokes. We found it curious that butterfly swimmers disqualified at a significantly lower rate than other strokes. While not within the scope of this study, we suspect that as one of the more difficult strokes, fewer novice athletes are attempting it, and waiting to compete in those races until they can better perform the stroke.

[SEE FIGURE 2, Pie Chart DQ by Stroke]

Pair analysis. Of the initial twenty EFSL athletes assessed, the average improvement for home meets was 0.05% while the average improvement for away meets was 1.97%. We saw 85% perform better at away meets than at home meets. These numbers track the trends we observed from the larger dataset observation where away competitions show more significant improvements than home competitions. Our T-Test shows significance at 95% confidence level, with U and Z test validation in Annex 1. Based on our modest sample size for this group, we do not anticipate adjusting our home and away improvements for use in the Monte Carlo simulation.

[See Chart of Away and Home Improvement]

Switching to the secondary pairwise analysis, we observed that 61% of the athletes performed better (as measured by percent time change in event) when they were competing in an away status. Interestingly enough, these athletes typically did not drop time, as measured against fastest previous time. This is due to the fact that as top tier programs, swimmers had many prior opportunities to swim fast at shaved and rested championship meets, and a mid-season meet (even against a top rival) infrequently generates time improvement in the top tier swimmers. However, the delta between the home and away results remains substantial with away team swimmers only missing 1.1% from prior best, whereas the home team averaged 2.1% slower than their prior best. These results are significant at the 90% confidence interval using a paired T-test, supported by U and Z testing.

Discussion and Application

Despite low density of research on home pool advantage, the broader sports literature is clear that the home team advantage exists in team sports as well as in individual sports. [33, 34] At the individual sport level, as officiating subjectivity increases so does the likelihood of home crowd influence and home advantage. [12] Since swim is a highly individualized sport where scoring is done by automated timing system, we expected to find no difference between home and away swimming performance and were surprised when an away team advantage revealed itself.

Impact on swimmers

Despite our prediction of a null hypothesis we found convincing evidence that there was, an “away team advantage.” “Away” swimmers dropped nearly three times as much time as home team competitors. In spite of being in an unfamiliar pool with a non-friendly crowd, oftentimes traveling long distances and sustaining on fast food with hotel beds - these swimmers outperformed competitors. Furthermore, we found that if we abandoned the scale of any performance delta from the seed times, and measured only whether someone improved upon seed, or did not improve; we observed that the traveling team improved at 6% to 8% more often than the home team competitors.

Other findings from our analysis validate existing research. We find that men have a slight, but still statistically significant improvement over women. This is expected as our study does not look at athletes older than high school swimmers, and there is ample research showing that men continue improving at ages above those when women tend to reach peak performance. [35] It is therefore not unexpected that men will find improvements at a higher rate than women, who are more likely to be at or approaching the apogee of their swimming career during mid high school years.

Broadly, we see two overarching factors that likely explain the observed results - one focusing on the team, and the second focusing on the athlete. The team focus is largely an economics perspective - away competition has a higher total cost, encouraging higher levels of preparation, and the athlete-centered factor is focus - away teams have a higher level of control over athletes.

From an economics perspective, we suspect that coaches are assessing the cost of participation differently for the two types of meets and therefore prepare for home meets differently than away meets. Away meets come with a higher cost of participation than home meets. Specifically, there is the financial cost of traveling, but perhaps more importantly, is the opportunity cost of lost training time and even lost classroom time. Home meet teams can often get in extra training while others travel, and are limited to short “warm up” times in a pool prior to the competition. Furthermore, there is the personal cost to coaches who often are foregoing family and career obligations to travel to competitions. [36] For these reasons, coaches will often place more emphasis on the away meet results in order to justify these additional costs. They are more likely to provide some rest to swimmers prior to the meet in order to facilitate better performances and will place swimmers in those events that will maximize the chance of success. Conversely, home meet coaches may use meets as either experimentation or an extension of the training regimen, or more of a “practice run” for high-importance competitions. Supporting this, the swimmers may have difficulty in shifting from practice mode to competition mode in the pool they train in day in and day out. [37] The lower total cost to the home team makes these meets

less important from a performance perspective.

We initially suspected that the higher rest and access to better pre-competition nutrition would provide a benefit to the home team, however after studying the results and upon reflection we find it likely that visiting teams overcome these assumed advantages with significantly higher levels of control over athletes than home teams. A home team is under the cognizance of the coaches when they arrive at the pool, but are on their own for the time prior to that. We find it likely that snack food and any number of distractions existing at home may test their commitment to optimum rest and nutrition. Conversely, coaches for visiting teams have a longer period of control over their team. Their presence during travel can impact rest and fueling, which athletes often under optimize. [38] They also have the ability to focus swimmers on the upcoming competition with fewer distractions. These pre-performance routines are shown to have significant and positive impacts on performance across sports. [39, 40] Especially at the sub-elite level athletic competition, the ability of coaches to guide athletes through these routines without distractions of home, may provide advantage to traveling swimmers.

Impact on team points

Swimming is of course a highly individual sport. Swimmers win and lose races exclusively on times. They qualify for teams, and elite competitions based on their ability to meet standards. For a swimmer, the results of our home pool advantage analysis would stop here.

Coaches, however, assess not only what is best for individual performance, but what will maximize team point capture. A Monte Carlo simulation utilizing the results of our quantitative analysis permits coaches to test the sensitivity of lineups. This gives a far more robust view of probable outcomes as compared to the simple summation of averages. With such a tool, coaches can create lineups with a better understanding of likely point swings.

Any performance advantages for individual swimmers will only transfer to team point shifts if those advantages translate to different finish orders. Therefore, we only expect a team advantage in competitions with closely matched competitors. If the predicted places of individuals are beyond time differences outside of any assumed advantage, then a team shift will not happen. Conversely, for a competition with tight races, this could result in significant point differences.

For very competitive fields with tightly clustered athletes' seed times, it is expected that broader and flatter curves will exist, whereas less competitive fields are likely to finish closer to seeded entries, regardless of home or away status. An analysis of four closely contested events produces the below distribution of points.

As shown in Figure 3, the expected distribution of swim times for an athlete with a seed time is slightly different between home and away teams. The uncertainty affiliated with this difference permits the creation of an event point's simulation, and by extension an entire meet point simulation based on the observed levels of uncertainty.

[SEE FIGURE 3, Likely distribution of times for swimmers with a seed time of 60 seconds]

Although we used a Microsoft Excel-based analysis, there are many other applications that can produce similar results for those with the proper skills. [41] We chose our approach to ensure that a coaching practitioner could replicate the results without requiring specialized training as is shown in Figure Three. By utilizing the identified mean improvements (Away: 1.3%, Home: 0.5% of seed time) as well as the standard deviations (Away: 0.03182, Home: 0.03737 of seed time) a coach can use Excel, Google Sheets, or any number of more complex programs to build a model of possible performance outcomes.

[SEE FIGURE 4: Distribution of team points across 4 equally seeded events.]

By simply adding the predicted point values for each swimmer in a team over many iterations, the coach can predict points for any given event, and by extension the entire meet. This approach provides a likelihood of each option so coaches can observe not only what may happen, but can also assess how likely each option is to occur. Once they build the spreadsheet, it is a simple task to swap out swimmers in different events and see if there are better lineup options, given the information developed in this article.

For instance, an analysis of swimmers in four events showed a range of point distributions depicted in Figure three. While the away team expects to gain the most points over these events, there are likelihoods where that point distribution will be minimal, or even where the home team swimmers may gain the advantage, based on the findings in this article. As the model grows with the addition of more events, we expect a flatter curve with larger areas of overlap.

Management implications for teams

For coaches, it is important to understand what factors act upon the athletes. If there is a level of focus and excitement that exists more in away meets, coaches may implement strategies to make home feel more like away. The addition of structures that force athletes to focus, such as curfews, team dinners (or breakfasts), or other meet and pre-meet rituals may ameliorate the advantage that away teams bring to the competition.

Conclusion

Decades of assumptions regarding the advantage of competing at home for swimming are wrong. Criteria driving performance in swimming differ from those of other sports. Away competitors have a quantifiable advantage in swimming. By studying the differences between the home and away experience, coaches may be able to either extend away advantage or mitigate home disadvantage.

Works Cited

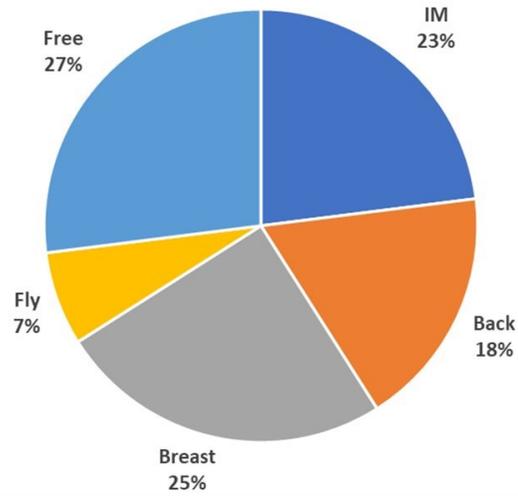
1. McNulty, C. (2023, March 24). The Home-Pool Advantage: Is It Real or Just a Myth? *Swimming World*. Retrieved from <https://www.swimmingworldmagazine.com/news/the-home-pool-advantage-is-it-real-or-just-a-myth>
2. Courneya, K. S., & Carron, A. V. (1992). The home-field advantage in sport competition: A literature review. *Journal of Sport and Exercise Psychology*, 28-39.
3. Pace, A. C. (1992). Travel and the National Hockey League. *Canadian Journal of Sports Sciences*, 60-64.
4. Gomez-Ruano, M. A., & Pollard, R. (2021). The Home Advantage Phenomenon in Sport. In M. A. Gomez-Ruano, R. Pollard, & M. A. Gómez-Ruano (Ed.), *Home Advantage in Sport: Causes and the Effect on Performance* (p. 3). Oxfordshire, UK: Routledge. doi:10.4324/9781003081456-2
5. Pinger, N. (2015, June 2015). Home Field Advantage: The Facts and the Fiction. Retrieved from Chicago Booth, University of Chicago: <https://www.chicagobooth.edu/review/home-field-advantage-facts-and-fiction>
6. Pollard, R., & Gomez, M. A. (n.d.). Components of home advantage in 157 national soccer leagues worldwide. *International Journal of Sport and Exercise Psychology*, 12(3), 218-233. doi:10.1080/1612197X.2014.888245
7. Neave, N., & Wolfson, S. (2003). Testosterone, territoriality, and the 'home advantage'. *Psychology & Behaviour*, 269-275.
8. Legaz-Arrese, A., Moliner-Urdiales, D., & Munguía-Izquierdo, D. (2013). Home Advantage and Sports Performance: Evidence, Causes and Psychological Implications. *Universitas Psychologica*, 933-943.
9. Doward, P., & Jones, M. (2007). Effects of crowd size on referee decisions: Analysis of the FA Cup. *Journal of Sports Sciences*, 25(14), 1541-1545.
10. Sutter, M., & Kocher, M. G. (2004). Favoritism of agents - the case of referees' home bias. *Journal of Economic Psychology*, 25(4), 461-469.
11. Nevill, A. M., Balmer, N. J., & Williams, A. M. (2002). The influence of crowd noise and experience upon refereeing decisions in football. *Psychology of Sport and Exercise*, 261-272.
12. Jones, M. B. (2013). The home advantage in individual sports: An augmented review. *Psychology of Sport and Exercise*, 14(3), 397-404.
13. Bica, J. (2021, April 19). Home Field Advantage: Does It Exist Without Fans? *Towards Data Science*. Retrieved April 4, 2023, from <https://towardsdatascience.com/home-field-advantage-does-it-exist-without-fans-a0778c5a6a29>
14. Shaw, D. (2023). Crowd and the home advantage. Retrieved from BelievePerform: <https://believeperform.com/crowd-and-the-home-advantage/>
15. Agnew, G. A., & Carron, A. V. (1994). Crowd effects and the home advantage. *International Journal of Sport Psychology*, 53-62.
16. Nevill, A., & Holder, R. (1999). Home Advantage in Sport. *Sports Med*, 28, 221-236.
17. Kelland, K. (2012, July 27). The roar of the crowd: A home advantage for team GB? *Reuters*. Retrieved from <https://www.reuters.com/article/us-oly-psychology-homeadvantage-day0-idUSBRE86Q0SV20120727>
18. Millsop, J. (2021, February 25). Boys Swimming and Diving: An era ends with a Warrior win. *Brainerd Dispatch*. Retrieved from <https://www.brainerddispatch.com/sports/boys-swimming-and-diving-an-era-ends-with-a-warrior-win>
19. Hadorn, C. (2023, February 3). HS AQUATICS: MHS, LHS to have home pool advantage at Region I-6A meet. *Midland Reporter-Telegram*. Retrieved April 4, 2023, from <https://www.mrt.com/sports/highschool/article/hs-aquatics-mhs-lhs-home-pool-advantage-region-17760510.php>
20. Morrissey, R. (2000, September 15). SPITZ'S REMARKS NOT GOLDEN. *Chicago Tribune*. Retrieved from <https://www.chicagotribune.com/news/ct-xpm-2000-09-16-0009160118-story.html>
21. Cuesta Athletics. (2021, April 12). Cuesta Swim & Dive Gains Home Pool Advantage. *Cuesta Athletics*. Retrieved April 4, 2023, from <https://www.cuestaathletics.com/sports/mswimdive/2020-21/releases/20210412wfguwat>

22. Brothers, A. (2023, February 9). The home pool advantage”: Memorial to host the AUS Swimming Championships. The Muse. Retrieved April 4, 2023, from <https://themuse.ca/the-home-pool-advantage-memorial-to-host-the-aus-swimming-championships/>
23. Mercer, N. (2023, February 9). Home pool advantage: MUN swimmers ready for the Atlantic University Sport swimming championships in St. John's this weekend. Retrieved from SaltWire: <https://www.saltwire.com/atlantic-canada/sports/home-pool-advantage-mun-swimmers-ready-for-the-atlantic-university-sport-swimming-championships-in-st-johns-this-weekend-100822975/>
24. Twietmeyer, G. (1967, January 20). Swimmers Splash off with MSU. Michigan Daily Digital Archives, p. 7. Retrieved from <https://digital.bentley.umich.edu/midaily/mdp.39015071754183/125>
25. Kidd, M. (2023). Home Pool Advantage Dataset. doi:10.17632/9g7683cnp7.1
26. Swimcloud. (2023). Swim Cloud Meet Results. Retrieved from Swimcloud: <https://www.swimcloud.com>
27. Vista Ridge Booster Club. (2023). Meet Results - Vista Ridge Swim and Dive. Retrieved from Vista Ridge Swim and Dive: <https://vrhsswim.swimtopia.com/meet-results>
28. WIAAWI. (2023). Wisconsin Fall Sports Results. Retrieved from Wisconsin Interscholastic Athletic Association: <https://www.wiaawi.org/Sports/Fall>
29. Swimming World. (2023). Swim Meet & Aquatics Results. Retrieved from Swimming World: <https://www.swimmingworldmagazine.com/results>
30. Atkinson, G., & Nevil, A. (2001). Selected Issues in the design and analysis of sport performance research. *Journal of Sports Science*, 811-827.
31. USA Swimming. (2023). Power Point Calculator. Retrieved from USA Swimming: <https://www.usaswimming.org/times/popular-resources/power-point-calculator>
32. Anders, A. R. (2014). Is home-field advantage driven by the fans? Evidence from across the ocean. *Applied Economics Letters*, 21(16), 1165-1168.
33. Jamieson, J. (2010). The Home Field Advantage in Athletics: A Meta-Analysis. *Journal of Applied Social Psychology*, 1819-1848.
34. Carron, A. V., Loughhead, T. M., & Bray, S. (2005). The home advantage in sports competitions: Courneya and Carron's (1992) conceptual framework a decade later. *Journal of Sports Science*, 395-407.
35. Rust, C. A., & Knechtle, B. (2012). Women achieve peak freestyle swim speed at earlier ages than men. *Open Access Journal of Sports Medicine*, 189-199. Retrieved from <https://www.tandfonline.com/doi/full/10.2147/OAJSM.S38174>
36. Dixon, M. A., & Bruening, J. E. (2007). Work-Family Conflict in Coaching 1: A Top-Down Perspective. *Journal of Sports Management*, 21(3), 377-406. doi:<https://doi.org/10.1123/jsm.21.3.377>
37. Busler, M. (2021, February 17). Swim teams have home-pool advantage every meet. WWNV TV. Retrieved April 15, 2023, from <https://www.wwnvtv.com/2021/02/17/swim-teams-have-home-pool-advantage-every-meet/>
38. Delru, J., Soenens, B., Morbee, S., Vansteenkiste, M., & Haerens, L. (2019). Do athletes' responses to coach autonomy support and control depend on the situation and athletes' personal motivation? *Psychology of Sport and Exercise*, 321-332. doi:<https://doi.org/10.1016/j.psychsport.2019.04.003>
39. Holter, J. (2023). Athlete Perception of Group Pre-Performance Routines and Sport Performance: A Quantitative Study. Tuscon: University of Arizona.
40. Rupperecht, A. G., Tran, U. S., & Gropel, P. (2021). The effectiveness of pre-performance routines in. *International Review of Sport and Exercise Psychology*. doi:10.1080/1750984X.2021.1944271
41. Au, B. (2020, September 28). Risk Analysis Using Monte Carlo Simulations in R. Retrieved from Pluralsight: <https://www.pluralsight.com/guides/risk-analysis-using-monte-carlo-simulations-in-r>

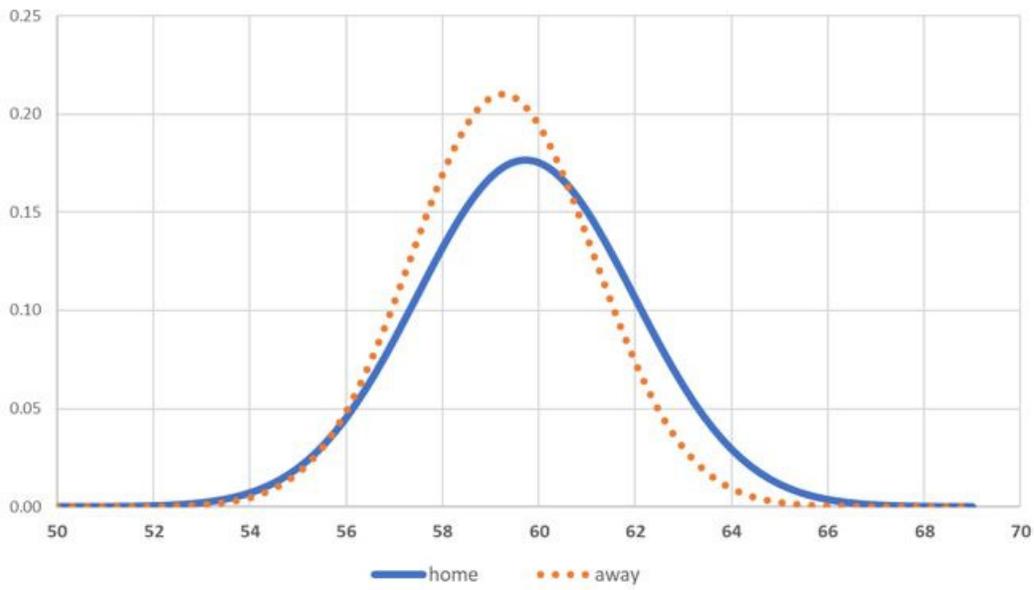
Swimmer (M-men, W-Women)	Away Improvement	Home Improvement	Better venue
M01	3.89%	3.38%	Away
M02	-2.33%	2.07%	Home
M03	3.96%	1.60%	Away
M04	1.60%	-2.24%	Away
M05	1.63%	-1.77%	Away
M06	1.84%	0.52%	Away
M07	7.93%	4.77%	Away
M08	-1.46%	-2.40%	Away
M09	0.07%	-1.40%	Away
M10	1.10%	-0.77%	Away
W01	0.07%	-1.92%	Away
W02	1.62%	1.15%	Away
W03	1.08%	-1.73%	Away
W04	0.60%	2.36%	Home
W05	2.70%	0.45%	Away
W06	0.31%	0.90%	Home
W07	3.97%	-0.96%	Away
W08	0.92%	-1.54%	Away
W09	2.90%	-0.57%	Away
W10	-0.34%	-0.35%	Away

	First Swim		Subsequent Swim	
	Away	Home	Away	Home
N	2760	457	1756	308
Mean Drop	1.30%	0.50%	1.30%	0.30%
Skew	0.26		0.52	
Kurtosis	7.24		4.21	
T-Test, P Value	4.36E-06		3.95E-07	
Did Drop Time	69%	62.70%	71.60%	63.40%
Did Drop Time T-Test, P Value	3.95E-05		0.001857	
Women Mean Drop	1.10%	0.60%		
Men Mean Drop	1.50%	0.50%		
Upper Tier Mean Drop	1.25%	1.12%		
Lower Tier Mean Drop	1.13%	-0.55%		
Disqualification Rate	1.10%	0.70%		
Average Power Point of Disqualification	179	209		
1st Pairwise Mean Drop	1.97%	0.05%		
1st Pairwise Performed Better Away	85%			
2nd Pairwise Mean Drop	-1.10%	-2.10%		
2nd Pairwise Performed Better Away	61%			
Table 1: Statistical results				

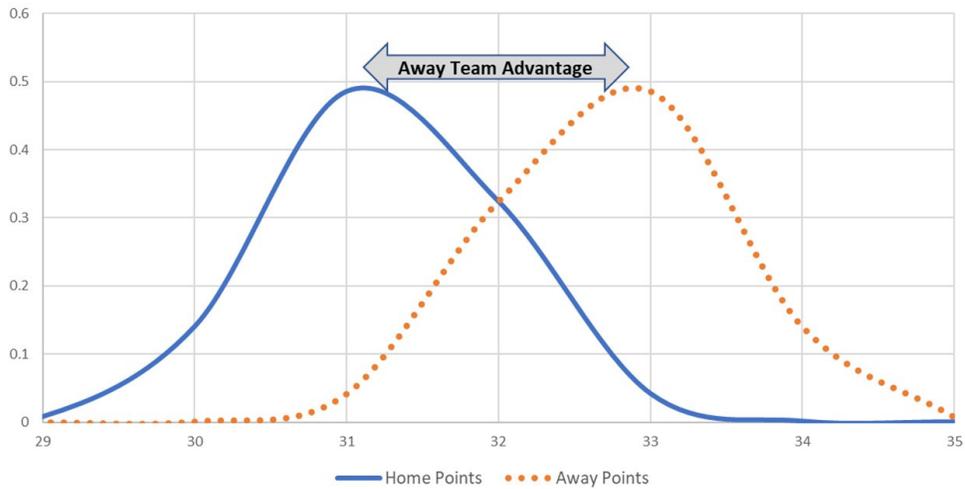
Total Disqualifications By Stroke



Estimated Disributions of Swimmers with a Seed time of 60 Seconds



Distribution of Points over 4 events - As Seeded, each team would have 32 points



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Photo Courtesy Naples Tiger Sharks

Michael Kidd coaches the Naples Tiger Shark Swim Team in Naples Italy and is a NATO Logistics Planner. His research focuses on bringing analytics to the management of youth swimming in order to improve the experience for swimmers and coaches. He has also written extensively on military logistics.



Shannon Buckley is a student at Liceo Archimede Scientific School. She has a decade of swim experience in the European Forces Swim League and competes for the Polisportiva Mimmo Ferrito swim team within the Federation of Italian Nuoto.



Photo Courtesy Stars and Stripes



THE DAILY COACH

"We can be our own worst enemy sometimes. We often think or expect the worst because it's the easiest thing to believe when we don't believe in ourselves. Instead of being your own worst enemy, be a little kinder to yourself. Give yourself the credit you deserve, and try to see the situation for how it is and not how you have created it in your mind. Give your mind a little rest, beautiful. Save that brain space for new ideas and new adventures, for the things you love and the people you love. Breathe in, breathe out. You've got this."

— Charlotte Freeman, *This Was Meant To Find You*

- ◆ It's A Beautiful Day
- ◆ It's a beautiful day to choose yourself.
- ◆ It's a beautiful day to recommit to the habits that bring you focus, clarity, and peace.
- ◆ It's a beautiful day to stop dwelling on things you can't control.
- ◆ It's a beautiful day to congratulate yourself on how far you've come.
- ◆ It's a beautiful day to go after the life you really want.

Please try to be patient with yourself—not just in public when people ask how you're doing ☹ but also in private, when the voice in your head tells you to quit, and imposter syndrome tells you that you're not up to the task, and anxiety tells you that you're too late to make a difference.

Ground yourself by focusing on one step at a time. You'll figure things out. But first, you have to trust yourself.

Source: *Michell C. Clark, Eyes On The Road*

Real Leaders Lead With Love

When we lead with love, we give strength and care to ourselves and others in a way that can transform any situation.

It is only the walls of fear, pain, and insecurity that trap us into believing love cannot conquer all.

When we work to let down those walls and connect to the DNA of our basic goodness, we are free to lead with love.

Those who lead with love live with fairness, empathy, and patience, doing so without conditions, judgment, or discrimination. When we employ those qualities, we are able to navigate even life's most difficult challenges. Lead with love, you will never regret it.

Source: *Cleo Wade, Heart Talk*

"In a world of instant gratification, long-term thinking, perseverance, and patience, is a huge competitive advantage."

Life humbles you as you age. You realize how much time you wasted on nonsense.

Don't give up. Pain is temporary. Regret is forever.

You are a product of your decisions.

Life begins at the end of your comfort zone.

Most things in your life are a reflection of a choice you made. If you want a different result, make a different choice.

Rather fail with honor than succeed as a fraud.

"In the small matters trust the mind, in the large ones the heart."
— Sigmund Freud

Each morning, we are born again. What we do today is what matters most.

Just because you think you deserve something doesn't mean you'll get it.

◆ *Not everything is worth fixing. Move on.*

◆ *Not everyone deserves to know the real you. Let them criticize who they think you are.*

◆ *One act of kindness can change someone's life forever.*

◆ *Don't tell me what they said about me. Tell me why they were so comfortable to say it around you.*

◆ *Life humbles you as you age. You realize how much time you wasted on nonsense.*

◆ *Life is a priority, not an option.*

◆ *Have more than you show. Speak less than you know.*

*Coaches are judged on wins and losses.
Leaders are judged by lives changed.*

- ◇ Happiness isn't a simple concept. Each of us needs to define it individually for ourselves.
- ◇ Purpose is not lived tomorrow. It is created today.
- ◇ All success is simply relative to someone else, usually those around you.
- ◇ "When I let go of what I am, I become what I might be." — *Lao Tzu*
- ◇ No one is impressed with your possessions as much as you are.
- ◇ My candle is always light.
- ◇ You will only know what the future lies when you get there.
- ◇ Be nice to people for no reason.



- ◆ The real test of an idea isn't whether it's true but whether it's useful.
- ◆ Never take advantage of how good someone is to you.
- ◆ Don't get too comfortable with your opinions. They are just opinions, not facts.
- ◆ Forgiving those who have hurt us is one of the bravest and most powerful acts of self-love.
- ◆ Your character is more important than your credentials.
- ◆ Stand up for yourself, never tolerate disrespect.
- ◆ Successful people are measured by the lives they've improved.



“Rather than waste your time being stressed over making the right decision, make the decision right.”



Allow today to be fearless.

- ◆ What does your day look like without fear?
- ◆ What are the words you are holding back because of fear?
- ◆ What are the dreams you are not making into reality because of fear?

Free yourself of those fears. Give yourself a chance to see what you can really do.

Source: Cleo Wade, Heart Talk

From Good to Great

10 Qualities of a Great Teammate

- Lead by example
- Sacrifice your ego
- Care passionately
- Brings out the best in others
- Communicate openly
- Be a positive impact
- Show respect
- Be reliable
- Competent
- Highly competitive

Source: JP Clark, Delaware Blue Coats Assistant Coach



Eyes On The Road

This chapter of your life might feel more uncomfortable than you want it to, but the discomfort you've been avoiding might end up being the impetus for the growth that you've been hoping to manifest.

This part of your life might be more of a hands-on project than a passive experience.

You might have to ask yourself some difficult questions.

You might have to let go of some situations that feel comfortable but stunt your growth.

You might have to get your hands dirty. You might have to remind yourself that the tests come before the breakthrough.

Source: Michell C. Clark, Eyes on the Road



People think focus means saying yes to the thing you've got to focus on. But that's not what it means at all.

It means saying no to the hundred other good ideas that there are.

You have to pick carefully. I'm actually as proud of the things we haven't done as the things we have done.

Innovation is saying no to 1,000 things.

Source: Steve Jobs



The Daily Coach

A daily hands-on approach to becoming a better leader. With the help of some unique wisdom as well as an action plan to tackle your day, **The Daily Coach** aims to be an inspiration in your email inbox each morning. Plus, it's **FREE**. Sign up for **The Daily Coach**: www.thedaily.coach/subscribe

BRAIN FOOD: Ideas, Thoughts, Insights, and Links To Get You Thinking (<http://fs.blog>)



"It's easier to get a smart person to do something hard than to get them to do something easy that doesn't matter."

"When you know what needs to be done, inaction increases stress. You feel a lot less stress when you do the things within your control that move you closer to your objective. Action reduces stress."

"A lack of routine causes more problems than poor choices. Routines turn desired behavior into default behavior."



"If you really want to be great at something, you have to truly care about it. If you want to be great in a particular area, you have to obsess over it. A lot of people say they want to be great, but they're not willing to make the sacrifices necessary to achieve greatness. They have other concerns, and they spread themselves out. ... Greatness isn't easy to achieve. It requires a lot of time, a lot of sacrifices. It requires a lot of tough choices. It requires your loved ones to sacrifice, too. So you have to have an understanding circle of family and friends. People don't always understand just how much effort from how many people goes into one person chasing a dream to be great. There's a fine balance between obsessing about your craft and being there for your family. It's akin to walking a tight-rope. Your legs are shaky, and you're trying to find your center. Whenever you lean too far in one direction, you correct your course and end up over leaning in the other direction. So you correct by leaning the other way again. That's the dance. You can't achieve greatness by walking a straight line."

Kobe Bryant



"There was something heavy in me. ... I wasn't doing the right thing. I was just trying to copy exactly everything I had learned. And I think that happens in every craft in life. You're young. You have a master. You want to emulate them, do what they do. But at some point in life, you have to turn around and say I have to find my own way in my own language."

Chef Francis Mallmann



"A vision gives a purpose to daily pursuits. A reason to push yourself out of bed each morning and do something. Without this purpose, it's easy to drift."

◆ *Bob Bowman*



We need to redefine "problems" into opportunities.

Problems are an opportunity to create value.

Problems are an opportunity to strengthen relationships.

Problems are an opportunity to differentiate yourself from others.

Every problem is an opportunity in disguise.



"There's nothing better than being the underdog. The more people count me out, the more I count myself in. I don't like to show all my cards too early, and that gives me two distinct advantages: my opponents often get the wrong read on me, and I push myself longer and harder. When it looks like you should pack it in but you still dig in anyway, you also pick up a lot of support."

T. Boone Pickens



Two questions to ask yourself:

What's working for you that you'd be crazy to change?

What's not working for you, and you'd be crazy not to change?"

- The most powerful productivity tool ever invented is simply the word no.
- The person who carefully designs their daily routine goes further than the person who negotiates with themselves every day.



Your worst day is a chance to show your best qualities, to stand out, and to learn an enormous amount about yourself. Very few people plan or prepare for what they'll do and how they'll act during those times. Those who do might well end up turning their worst day into their best.



Amateurs have a goal. Professionals have a system.



Richard Garriott on believing in what you do so much that you do it anyway:

"Luck is the intersection of preparation and opportunity. Opportunities parade past all of us all the time. The key is that you must be paying attention to see them, you must be willing to take risks, you must expose yourself to the possibility of massive failure and you must believe in what you are doing so much that you do it anyway."



Thomas Edison on perseverance:

"Many of life's failures are people who didn't realize how close they were to success when they gave up."



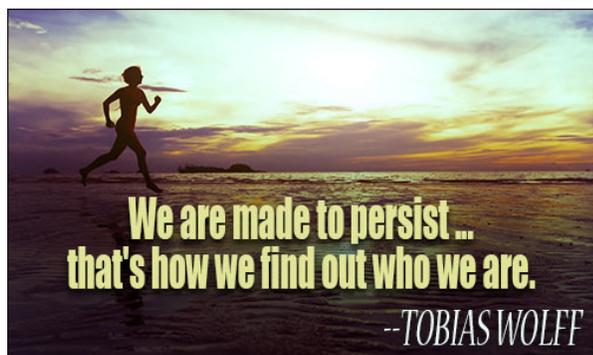
So much advantage in life comes from being willing to look like a failure in the short term.

A lack of patience changes the outcome.

Consistent progress compounds.

Inconsistent progress is a lie.

***Make a little progress today on your most important objective.
Repeat tomorrow.***

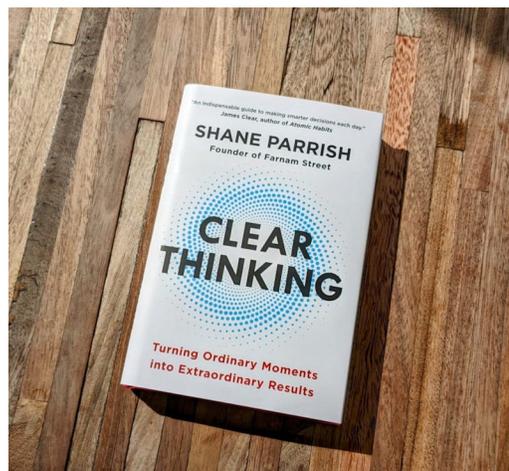


Success and Failure

The world's best performance psychologist, Dr. Gio Valiante, on how your mindset matters more than you think:

"People think of success and failure as opposite things—that the more I succeed, the less I fail. But that's really sort of a modern conception of success and failure. The fact of the matter is [that] failure is woven into the fabric of success. It's not "How do you avoid failure?" That's the wrong question. The right question is, "How do I fail, or how should I fail in ways that lead to the type of skill development and belief system that allow me to succeed long term?" It's "How do we fail?"

Two individuals, everything else being equal—same education, same ability, same training, same everything. One of them goes at their craft or at their domain or at their career from a place of "I love to learn. I love to problem-solve. I go into depth with these things and ... I'm not engaged in image management." The second individual goes in, competing against other people, over-caring about what people think. Success is only defined by that which is palpable or tangible, like they're playing for trophies. Then you fail—because if you're ... trying to get at the tail end of the curve, you're going to fail—and you react with embarrassment. When we talk about the toxic emotions, embarrassment is—depends on the person—but it's one of the two most painful psychological experiences a person can have."



Clear Thinking is not just another self-help book—it's a transformative guide that hands you the tools to master your own fate, sharpen your decision-making, and position yourself for success. Order your copy from Amazon or grab a copy at your favorite bookstore.



Step Up Your Game With These Products From SwimSmart

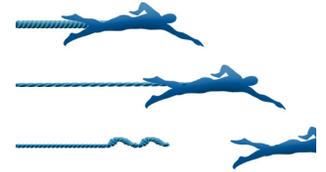


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Fix bad dolphin kicking!
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Moon cut-out for streamlining
Three sizes for any ability

Break-Away

Fix bad resistance sets!
Automatic release system
Use with Power Towers
A whole new ability

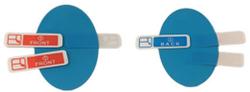


Power Harness

Fix bad body alignment!
Drive with the shoulders
Use with any resistance tool
Carabiner for quick exchanges

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Fits virtually any goggle
Two pairs included

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Audible BEEP for feedback
Soft silicone case
Every streamline, every wall

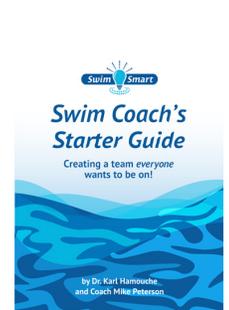


E(xchange)- Paddles

Fix dropped elbows and train EVF
Exchange all paddles for variety
Incentivize the body to grip with the forearm
Ala-carte combinations available by email

Swim Coach's Starter Guide

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Perfect for new coaches
A resource for head coaches
Directly applicable guidelines



Free Download-ables

Fix bad organization!
Improve your coaching ability
Tools to build training guidelines
Learning for the whole team

Courses

Fix bad swimming knowledge!
Easily digestible presentations
Wide range of topics
Other companies offered too



Because SMART swimming
is FAST swimming!

We are swim coaches
fixing swimming problems.

Find solutions that come from
our pool deck to yours.

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PLAQUES

\$49.95 / PQ-NISFAC

Wood plaque displays the All-American certificate printed on a clear acrylic overlay so it's waterproof. It measures 10½" x 13" and comes individually boxed for presentation. Available in Water Polo, Diving, Academic, Team Scholar Award and Swimming.



\$79.95 / PQ-NISLAM

Laminated certificate plaque displays actual All-American certificate laminated on a wood plaque. It measures 10½" x 13" and comes individually boxed for presentation. Available in Water Polo, Diving, Academic, Team Scholar Award and Swimming.

\$54.95 / PQ-NISFDE

Engraved certificate plaque depicts the All-American certificate laser engraved directly into a black brass plate. It measures 10½" x 13" and comes individually boxed for presentation. Available in Water Polo, Diving, Academic, Team Scholar Award and Swimming.



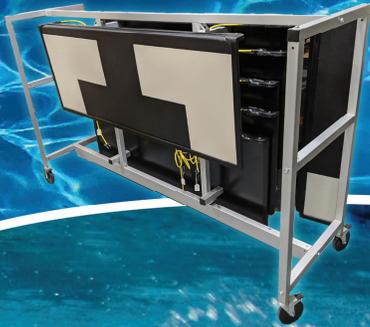
\$79.95 / PQ-NISACR

Acrylic plaque with stand-off displays the All-American certificate printed directly on the acrylic. It measures 10½" x 13" and comes individually boxed for presentation. Available in Water Polo, Diving, Academic, Team Scholar Award and Swimming.

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3	CIRCLE SWIM*****NO DIVING			3
4	TREVANS			4
5	CIRCLE SWIM*****NO DIVING			5
6	FEET FIRST ENTRY* * *CIRCLE SWIM			6
7	CIRCLE SWIM*****NO DIVING			7
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Nancy donates a portion of all sales from these prints to NISCA!



Spring Lake High School , Spring Lake, MI
Assistant Coach Brian Porter, Head Coach Mick Homan
Photo Courtesy Mick Homan