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# The Worthy Challenge to Ourselves.

by John Leonard

**T**he United States of America has been the world leader in swimming in the Olympic Years for every Olympiad since the beginning of the modern games, with the one exception of 1956 when the Aussies kicked our butts down under.





Every other Olympic Games has belonged to the USA. Most world ranking lists in the in-between years, have been dominated by the USA. We are always in the same pattern. The year immediately following the Games, we are “weakest” by comparison (but still the best in the world). Each year following, we get better. In the Olympic Year, we are the Best. Our competitors always see and wish for, our impending doom in the first year post Games. Laughable. A great example of not understanding history, nor what the USA cares about. Which is the Olympic Games.

The world knows we are the peak of world swimming. So far, no nation, despite cheating of a remarkable magnitude by a few nations, has ever come close to beating us in the Olympic Year. That is a remarkable consistency of excellence. Congratulations to generations of our coaches and athletes.

The question then, becomes what is the **WORTHY CHALLENGE** that can keep us motivated and **IMPROVING?**

The most important factor in the USA in maintaining/expanding our capacity and performance is a leader who challenges us to rise above whatever our current performance is, and reach for our potential. And define and explain that potential. Coach Schubert had it right and Coach Daland some aspects even before Coach Schubert – Win Every Gold Medal and All the Relays at the Olympic Games. With our advantages, and the general weaknesses of the rest of the world, that is attainable. And it is a **WORTHY** and **HISTORICAL** Goal.

Sadly, our current individuals who hold management positions, are more concerned with proving to Congress that we don’t encourage sex with children, than the attainment of truly excellent performance on the world stage. Without a change, we will continue to coast along, and will respond (only slightly) if anyone (China? Brazil?) mounts a significant challenge to our world leading performance. (no such challenge is in the cards as of now, I believe). It appears that “Good enough is Good enough” for our current leaders. Or at least, I should say, if we have goals and ambitions beyond that, they are invisible. Australia, our great historical challenger, seems the poster child right now for mucking up any real attempt to mount a challenge. How Aussie leadership over the past two decade has managed to screw this up so badly is a cautionary lesson for all of us. One of my questions is if anyone in the USA Swimming office even understands the horrible example set by your friends in Australian Swimming. Or do our current managers lack the oversight and capacity to truly even understand it. The further away from the coaching deck our “leaders” get, the further off course we shall veer, exactly as the Aussies have done, among other nations.

**We need a COACH LEADER in the area of performance.** Period. We need to refocus on performance. Safety of our children is a paramount issue, but it is also a given in the operation of our sport. Make SafeR sport a reality. (it will never be safe, anymore than our schools or churches are “safe” for our children.) Our opportunity for excellence is in Performance. ■



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# THE MISSION VIEJO DRYLAND PROGRAM: AGE GROUP TO SENIOR

by Bryan Dedeaux

Bryan Dedeaux: Thank you. I am hopeful I get you guys to wake up a little bit and have some fun today. You guys brought your gym shorts and your shoes, right? [LAUGHS] This is hands on today, so be ready. You are going to be up, you are going to be down, you are doing burpees and bird dogs and all that stuff. I am just kidding, relax.

[LAUGHS]

But before we get onto anything else, I just want to thank the ASCA for letting me talk; John Leonard, Guy Edson, and everybody at the ASCA that's making this happen. It is an amazing event that we get to go to every year. I haven't been in quite a few years, and I am really excited to be back. It is in my hometown, I live about 25 minutes down the freeway. My other home is about a five-minute walk, it is called Disney Land. [LAUGHS] I have two children, a five-year-old and a ten-year-old, and we just got season passes last year. They're running out, so we got to go. We might even go after this. Let me know if you guys want to go. We can be at Ariel's Grotto, have a drink.

Also, I want to make sure that I thank Coach Mark for allowing me to be here and do this for you guys and also, for allowing me to be a part of our dryland program. It is something that I love to do, and it is something that I have been working on for many years with the program. I have been a Nadadore for almost 20 years now. I have seen it go from barely any dryland, some jumping jacks and some you know, light calisthenics, some stretching. Then, getting in to a monstrous power house, where you step on deck and there are kids running around, medicine balls flying and all that. We always joke around that before the renovation, there will be these moms taking their little kids up to the swim school and they would go right through the pathway where the National team was slamming these 20, 30-pound medicine balls. They would be throwing them up in the air and letting them bounce. And we thought, "One of these little children is going to get smashed, and we are going to get sued. It is going to be terrible." But, that was our dryland program. We were everywhere on the pool deck. Anytime you walked on the pool deck, there was a corner of the pool deck being used for something fun

and something exciting in our dryland program.

I am now part of it in a whole new way. I have been lucky enough to have the chance to work with our National team in the weight room. I have Mark Schubert to thank for that, for seeing that in me and knowing that he could trust me to do that with his athletes. It is great to get back to seeing those kids because I coached them when they were 9 and 10 and to get them as Seniors on the National team, it was a lot of fun for me. It was a good experience.

I am going to take you through dryland from basically from bottom to top, okay. I am a certified functional strength coach, so all those little letters underneath make me sound really important, but it is not really that big of a deal. Certified functional strength coach, certified sports nutrition coach, National Association of Fitness Certification, which is my first personal training certification. FMS: Functional Movement Systems, and then the three last ones, I just made up. There is real nice guy, R&D. [LAUGHS] There is 'super rad dad,' that one my son made up, and there is 'socially awkward introvert.' So, if we go out and have a drink afterwards you might regret it.

[LAUGHS]

You can contact me through my email. I am on Instagram, it is [cbd\\_functionalfitness](#). Bryan Dedeaux on Facebook, and we have strength training for swimmers on Facebook. I am working with some amazing coaches on that seeing a lot of good, continuing education. If you want to join up with that, just find us.

Ten things about me; completely unrelated to my talk. I have already gone over a couple of them, but I love Metallica. They are my favorite band. I am a huge Star Wars nerd, I love reptiles, I have a lizard named Fren. I am Kings fan, LA Kings all the way. I read comics book, I love craft beer, which is a bit of a problem, and I work at a gym and I am the only trainer there with the big belly. I am the least in-shape person in that gym, but anyway, I blame that on the craft beer. I am a middle child- probably the best looking, but at least the smartest. Soccer was my sport, I was not a year-round club swimmer. I did year around soccer, I loved it.

I got a little burned out after a while and decided to quit. But, I started coaching when I was around 13. I was in the water telling kids, "Big arms," "Blow bubbles," that kind of stuff. That's all I have ever done, essentially, is coach swimming, but soccer was my first sport love.

I love punk rock shows. Me and my wife go to punk rock shows every now and then. We try to go see Alkaline Trio, our favorite band. I don't know if anybody knows Alkaline Trio, but they just had a new album come out; it is amazing. If you want to check that out, some of you guys would be disgusted because you don't like that kind of music, but I do, it is really cool. Okay, and my nickname when I was 8, little swimmer in summer league was Speedo-dedo. And it stuck, and every now and then somebody will bring that up.

I don't need a shirt or a banner, thank you. The biggest problem in the fitness industry is the notion that you need to crush your clients with killer workouts that have been crawling out of your gym in a pool of sweat. 'That was a great workout, I couldn't sit down for 3 days.' The problem with that is that's 3 days that their athlete can't practice their sport or play their game at an optimal level. We have the same problem in swimming. Lot of swim coaches will throw their athletes on the pool deck and run them through vigorous, intense, and sometimes dangerous workouts that have very little to do with what they are doing in the water. There is no real purpose other than, "I like to smash my swimmers into the ground, so that they know what the tough work is about."

What I am going to talk about today is kind of opposite of that. There needs to be a more purposeful approach and more engagement from the coaching staff on why you are doing dryland, and also to let you know that if you don't do dryland, that's okay, too. It might be better to say, "I am not going to do dryland because we don't have the space, we don't have the equipment, we don't have the time, we don't have the coaching staff and we don't have the knowledge to do it safely." That's perfectly acceptable, as well. There are plenty of great swimmers that have gone through and done great things without heavy dryland program.

This is what we want. We want an athlete with big muscles and a really good tan. I hope you know what you are going for. [LAUGHS] Starting at the bottom of what you guys might see in the water- we have these little kids and doing dryland for them is going to be a lot different than what you see in the older kids, but it all starts here. All right, this is my son, he has been doing gymnastics. This is about a year ago, but sports and motor acquisition and motor control, it is a trial and success endeavor. If you keep working at it, eventually it will stick. Then go down and fall again, [LAUGHS] but that's okay, that's a part of it. You should expect that, if you are good swim coach. You know swimmers are going to get things and then they are going to lose things, they are going to get them, but you got to keep working on the motor skills and the motor patterns and keep having fun. He loves this, he gets hurt all the time. I mean he comes home with bruises and bloody noses and sweat dripping everywhere, but he loves gymnastics. If I had my choice, I would have my entire team in the gymnasium doing these gymnastics things because it is great for motor development for these little kids.

All right, some things to consider when creating a dryland program, whether it is the entire team or your own group. First rule, "Do no harm." Okay, I want this to sink in a little bit because this is really important, 'do no harm.' Do no harm, we cannot hurt our athletes. We are always worried about doing too much yardage and hurting their shoulders and improper technique, and that's great. We should be worried about that. But when we do dryland, it is the same thing. We need to take just as much care of these athletes out of the water, as we do in the water. We can't have them doing crazy exercises that could potentially hurt them if we are not qualified to help them do that properly and safely and at the rate that they can handle; do no harm.

Risk versus reward, the exercise choices that you have. You have to understand that some of them are awesome and have a lot of bang for your buck, and some of them don't. You need to decide whether the exercises that you are doing are going to benefit your child and benefit you athletes more than hurt them. If you are going to 500 burpees, what's the risk versus reward of that? Okay, chances are: they are going to be sore, they're going to be tired, they may get injured, but they got in really good shape doing 500 burpees. You have make that choice. Age and experience of some of the athletes. If you are a 10 and Under coach like myself, you need to make sure that you are not putting them in a position where hang cleans are next on

the list. What is your purpose? Are you trying to condition the athlete, or you trying to make them stronger, are you trying to create a more mobile athlete? What is the purpose? Think about why you are doing it and is it necessary?

Time and space limitations. Like I said before, the Nadadore pool deck was a madhouse of dryland and I stuck with my little corner, and I really didn't like to deviate from that because it was the safest area I could find for my kids. There was one little spot that dipped down and there was a little concrete ledge, right in front of that, and I would stand right there because that was essentially the only dangerous part of that area. But, everything else was fenced off and it was grass and it was very safe and that's why I choose to do my dryland. And I chose to stick with that, because that's going to worry me the least I would say, okay, "Worry me the least."

Creating a season plan. Are you going to create a season plan around your swim program or you are just going to throw dryland at them? That is something I have seen with the Nadadores in the past, where coaches would just throw a bunch of dryland. It is awesome dryland and it is really exciting and it is fun to watch. But there is really no rhyme or reason and there is no periodization. There is no connection from dryland to swim. When you are creating a season plan for your swim portion, make sure you think about that, as well for your dryland portion. Keep it super simple. I am a big fan of: 'If it confuses me, I ain't going to do it.' If it is too challenging and it is too hard for me to teach a group of athletes simply and easily, then I'm probably going to dump it; I'm not going to use it. Keep it super simple, I think that's very important for all coaches to understand and to implement into their programs. Keep it simple, complexity doesn't necessarily mean you are going to get a better athlete.

First and foremost, we are teachers. We need to take them how to do these things and we need to use them how to do the simplest of exercises. A push up, a squat; don't just have them go up and down, up and down up, up and down, up and down. There is technique to everything we do. There is technique in all dryland exercises, it is just like it is in swimming. So, we are going to teach it the best way we can, just like we would in the pool. We do not compromise our swimmers stroke technique. We should not compromise their dryland technique either.

Many consider the joint by joint approach may help you understand the athlete and the human body just a little bit better. If you look at it, you have a mobile joint at the bottom at the ankles, you have

a stable joint and it is going to pattern itself all the way up the chain. You have a mobile joint, a stable joint, a mobile joint, a stable joint, a mobile joint, a stable joint, all the way through. Understanding what joints are meant to be mobile and what joints are meant to be stable can help you make some good selections with your program, just something to think about.

I also wanted to bring up the whole buckets approach that I've heard from Michael Boyle, a very famous Strength Coach from the East Coast. He is one of my mentors and the certifications that I have come from him and his programs. He had this idea that sometimes you have too much of one thing, so like I look at our swimmer, who are conditioned to the max; the aerobic endurance is outstanding. You get a swimmer and if they are halfway decent athlete, you could put them on the field and they will outrun anybody. They will out run anybody on the soccer field. They are the best conditioned athlete. When we are doing our dryland program, do we need to focus on endurance? You look at our athletes, some of them are very immobile and some of them are hypermobile. Now, this is just me throwing arrows up there, like this is one athlete. Our strength bucket is pretty good, our endurance bucket is amazing, our power bucket is even better, and our mobility is really bad. There are all these other parts that you could add; there are many buckets.

If I have an athlete who has got plenty of endurance, am I going to take him out and have him run miles? Probably not. You have to understand the bucket situation. Identify which bucket requires the most attention, and maybe target that first. Then, we have our movement patterns, and this is going to be, like, if you want to take a picture, this is probably the thing you should take the picture of because everything is foundationally based upon these movement patterns or movement priorities. You have your vertical and horizontal pushing, vertical and horizontal pulling, hips and arms, and exercises. Then, along with aquatic postures, some movement prep and carries groundwork, skipping, jumping and climbing. Everything you do from 8 and Unders up should be based upon this. Now you may not have an 8 and Under doing any type of overhead lifting. Obviously, you are not going to have him lifting any dumbbells or weights, but you have to find a way to get them to move in these patterns.

We have progressions and regressions. This is a very valuable tool to understand here. If you have a TRX row and that's your baseline exercise, you're going to row, right? If somebody can't do that

and they struggle with the TRX row, we want to make it easier for them. We get them off of their feet, maybe we have them do something a little lighter. That's easier; having them standing upright rather than leaning back or a seated cable row where you got three points of contact. You have your two feet and your butt and that is a very stable exercise. That's going to make it even easier. If you want to make a TRX row harder and you are done with the TRX, you could go to a dumbbell row, which is going to be a more advanced exercise. Then after that, you could potentially go to a barbell bent over row, which is a much more complex movement, and requires a lot more movement skill.

Not every athlete is built the same and they are not going to be able to do all the same exercise the way you want them to do it. How do we compensate for movement differences and movement illiteracy in some athletes? Well, we have to understand that they are all not going to move the same and we can regress and progress each exercise. If you can get a good grip on that, then you can make any dryland program successful. Determine the baseline exercise moves, move up, move down based on that; you can progress or regress based on their limitation or their abilities.

Team progression. The age groups. Coached 9 and 10 for forever. As long as I remember, I have been the Division Director since 2004 and I started coaching with Nadadores in 1999. I have been coaching 10 and Unders with the Nadadores, the entire time. I love coaching 10 and Unders, and dryland is one of my favorite parts of everyday. But, I've been working with 11 and 12s and working with 8 and Unders recently and also working with our National team in the weight room. Essentially it is all the same, you focus on the movement patterns, you have fun and enjoy the time you have there, and you move on and progress.

10 and under dryland. Oh, here is that cool kid again, doing gymnastics. I absolutely love gymnastics, I already talked about it. I think things like gymnastics and ninja warrior courses and classes are great for the kids. They are going to learn a lot on how their body works and the kinesthetic awareness that arises from that. Free play is great, if you just let the kids run around in the field with a soccer ball, they will make a game out of it. They will have some fun, there will be some great things. You could have them play flag football and those type of things, which are great.

Nada-war, you have got to checkout. Of course, tag. Tag is the greatest game

ever. Everyone knows tag, I have got like 20 different kinds of tag that I play with my kids and the kids love every single one of them. Introduction to strength training and organized movement, and when I say, "Organized movement," I just mean squats, lunges and some of those movement patterns. Exercises that they are going to be doing, crawling, throwing and jumping, and making sure that they do it properly and correct.

This is our 9- 10 group, and they are doing movement prep. There we go. We do simple knee hugs, we do a leg grab and the back, and this is very basic. This is the normal stuff that most movement prep coaches will have you do. Leg cradle, straight leg kick, reacceleration on the way back down, some of them are getting a little crazy in there, but they are still learning. We do skipping. I think kids should learn how to skip. If you've watched your athlete skip, they frolic, like they are in the movie and they just look silly. It is cute, but it is not the way I like to teach it.

Any kind of crawling is amazing, getting on the ground and doing those exercises is fantastic. We do some lateral bonding, some high knee work. We just do a lot of stuff to get there. Ankles tubed up and their body working in a way that's going to help them swim better and get a little stronger and everything. We have some animal flow, which is a little bit of fun, they love doing animal flow. If you don't know what animal flow is, look it up, it is a really fun. It is not necessarily a dryland thing, but I make it a dryland thing for us and you can do it anywhere. This is basically a movement flow for the kids that we work on. We will do a couple of different exercises and then we will let them go, we will let them flow. We will let them work on whatever they want to do.

A typical 10 and under workout: we have movement prep, we have warm up, we have skill work, so movement patterns. We are working on like a squat or a push up, and some conditioning. We often do a circuit; jump rope, running, or groundwork, and then we will play some fun games. We will do some stuff. We will have them play tag. I will come up with something, I always come up with creative things to do with the kids. Animal flow is one of those things that I really enjoy doing.

Any questions on 10 and Unders and dryland for 10 and Unders? Yes.

Male Speaker 1: Do they have to wear sneakers for animal flow?

Bryan Dedeaux: Sometimes they have to make funny noises, yes, [LAUGHS].

Typically, I don't allow my kids to come and do dryland without shoes unless we are doing some of the groundwork stuff. Like, you saw the girl had no shoes on. In fact, I think she had jeans on and no shoes, which is a 'no, no.' But, if they come to the pool and have no shoes, they have to sit out they have to watch. They can help me and they can be my assistant, but they don't want to miss dryland, so they don't typically forget their shoes often.

11 and over dryland. You have your strength training, I mean it is all strength training. It is all strength training, but this is the bridge to getting them to do some of the things in the weight room that you are going to see in the next couple of slides. Proper movement prep, which is what we saw the 9-10s doing. There are other exercises you can do to add to that; use of equipment for complex and dynamic movements so you can get your TRX, you can use sliders, stretch cords, stability balls, and you can use some of the stuff for the 9-10s as well. But, this is where it would be a lot of fun, if you use it with 11- 12s.

Training becomes its own sport. The kids are going to learn some new skills that they have never done before. That excitement level of doing something that they have never done before, getting good at it, and mastering a skill, they love that part of dryland. A lot of limitations to overcome in dryland. If some swimmer has trouble doing a squat and you can identify what the problem is with that squat and fix it, they are going to think you are a pretty awesome coach. They are going to love that and that's something they look forward to. Consider limiting the aerobic conditioning out of the strength and conditioning, that's where you go back to the buckets. Now I am not necessarily saying that you have to take conditioning out of it, but they are already very conditioned athletes. Think about how much of that you are going to put and how much time you have for dryland. If you have an hour for dryland, maybe putting some extra aerobic conditioning in there is okay, but if you have 20 minutes or 30 minutes, perhaps there are other things that would be better and would be better to work on.

Okay, yoga for swimmers. Jeff, I believe, is in the other room right now working on yoga and you guys are going, "Man, I should have gone to the yoga talk." No, but he has some great stuff. There is swimming-specific yoga, those are great websites that have checked out and they can give you some yoga workouts to do with your athletes right there on the spot. Even better, I have my assistant coach Rebecca, she does yoga with my 10 and Unders and it is awesome. I just sit back

and I'm checking Facebook because she's got it under control; she is awesome. She walks the kids through some really simple, but fun exercises and it is different. Then if somehow Rebecca gets me out there to do the yoga with them, then the kids get to laugh at me because I am like a dry stick and I just break when I move; it is just awful. Anyway, she is great; thanks, Rebecca.

Good for strength, mobility, and some motor control; now here is 11- 12 workout that I did with some kids a couple of years ago. I didn't have any videos of Sarah's kids doing their dry-land, but essentially this is a circuit that I like to do. I do three rounds of 3 exercises. They are 50 seconds each. This one is going to be single leg, single arm row. Working on stability, balance, and a pulling exercise or a horizontal pulling exercise. Hip lift, single leg, elevated hip working on the glutes and a hip abdomen exercise. Okay, if you want to watch that again, I will try to get that to work.

Essentially, what you're doing is you are picking multiple movement patterns and adding them into a circuit so you can do conditioning while working on the movement patterns that we talked about. Can we get into the weight room? Now 30- 40s certainly don't have to be in the weight room, they can do all of the other things that we saw and more. But, this is where I feel comfortable putting athletes in the weight room. I think that they are mature enough to handle it, and their bodies can deal with it. Okay, I think any kid at any age can if you wanted them to, lift weights, but again, there is risk versus reward. There is purpose. Do we need to do this? Are there more important things to work on? You are not going to stunt a child's growth by having him lift weights.

What are your big compound lifts? You may pick dead lifts and squats and a bench press. I probably wouldn't pick bench press with the bar and I probably wouldn't do a back squat with my athletes. But that would be a typical compound exercise. Dead lift would be great. What are your main exercises? What are your accessory exercises? Those are the exercises that served you. Enhance the big lifts and also the complementary pieces of the puzzle. Ways to enhance your mobility and stability to improve on all the other lifts and where does mobility and stability fit in? When you are in the weight room, if you have an hour in the weight room, it is tough to get everything in. But you can't fit in your mobility work, you can't fit in your stability work, and if you can't, do it on the days that you are not in the weight room. I do believe it is important, I do believe we need to consider mobility and stability needs for the athlete.

What are your accommodations for movement limitations? If you have a child, like I said, if they can't squat properly and you're trying to get them to get toes forward, hip straight and you are trying to get them to do a squat and they can't do it, don't just say, "Go deeper." Figure out what's wrong. Maybe their hips are designed a little bit differently, maybe they need to open their toes up. Everybody is built differently. If you could figure that out, then they can do a squat and they can start loading it. Once they're loading, then they can go heavier. You can do FMS, Functional Movement Screening, or other assessments, or you can use your eyes. Okay, there is the 'sh\*t test,' if it looks like sh\*t, it is probably sh\*t. Change something.

Is your core work addressing aquatic posture? This one kills me because the kids want to do abs, they want to do abs, they want to do abs, and they want to feel it. They want their little bumps right here. The thing is that's not what core work is all about. It is not about sit-ups, it is not about crunches, it is not about any one exercise and it is not certainly not about feeling it. Core work is about allowing purposeful movement of the limbs without unwanted movement of the spine. Protect on a global scale, everything around your core. Front, back, middle, everything, so that your limbs can move safely and you have unwanted movement in the spine. A global posture to supporting and defend the spine.

There's a lot of different ways to do that. If you are constantly putting yourself in flexion, all the time by doing all these crunches, your athletes are going to feel that and they're going to feel good about it, but they're not necessarily going to get that much out of it. There's a whole other approach that you should be thinking about. I'll go over the aquatic posture work in just a little bit.

Weight room culture; this is a big one as well. You must unlearn what you have learned. Everybody knows Yoda, right? Best quote ever. Social media, you are going to see some of the dumbest stuff on the planet. You have to be very careful, you are going to be fighting that; that's a challenge because they saw something on YouTube. One of their friend's websites or whatever. Other sports, you might have a swimmer, who is best friends with the football player. I don't think those two things are going to match up very well if the swimmer is trying to do the things that the football player is doing in the gym. You have to combat that and try to educate them and help them understand that's not necessarily the best option for you. They are also going to see all the big muscular dudes like that first guy that I put there, who is ripped.

They might want to look like that and I think that strength is going to translate into swimming.

Past experiences, maybe another coach was doing a whole bunch of other stuff and you come in and you say, "Okay, we are going to do a bird dog," and they're like, "I don't feel it, I don't like it, I don't want it. I just want to do my abs, I just want to do my sit-ups, and I want to feel it," right, so they may have past experiences that don't line up with what she want for your athletes and your vision. "It is all on YouTube." [LAUGHS] Right, you are going to get some of your athletes, and if you do not supervise them and you don't have a program for them and you don't educate them, then this could happen. "I just want to lift heavy," 'Ooh, so close, so close, so close.' This is my favorite, I want to do functional training, so this is on the other spectrum.

[LAUGHS]

So, we keep it super simple. It goes back to the kids, keep it super simple. This is how I roll, this is the way I do it in the weight room, and it is not always the most exciting, but it works. You are not going to see any of my athletes getting rolled over any kind of ball or getting crazy with that stuff. Pushing away from me, that's what a horizontal push is, this is just real basic. Something like a push up, bench press, and mine press. Horizontal pulling, that's again pulling towards you; TRX rows, face pulls, or dumbbell rows. Vertical pushing and vertical pulling; vertical push would be like an overhead press pushing up, kettle bell bottom ups, press or land mine press with a lean and upward scapula rotation. Instead of just pressing it forward at a diagonal angle, you are going to them lean and upwardly rotate the scapula and make it more of an overhead and work on that scapula.

Pull ups, straight arm pull downs or lap pull downs are your vertical pulling exercises. She is doing basically a modified lat pull down with the TRX. She is pulling herself up because at the gym we didn't have access to the racks because all the football meatheads we are using them and we had to use something else, so we did this. It works great; they got a lot out of it.

Hip dominant exercises: dead lifts, RDL, and hip lifts. This is basically going to be coming from the hips and then you have your knee dominant exercise like squats, lunges or step-ups. I want you guys to stand up because we are going to do a little exercise because a lot of people don't know the difference between a squat and a hinge. You don't have to, but this is a hinge. Stand up, now push your butt back and try to touch

the back of the chair without sitting down. There is your hinge. You didn't bend your knees a whole lot, your shins are pretty vertical, now hopefully keep your back nice and flat. Now a squat is 'touch your butt to the chair and stand back up.' There you go, there is your squat, so did you feel the difference? One of them is more hip-dominant and one of them is more knee-dominant. The down and up of your hips is your squat, and the hips going back and forward is your hip-dominant exercise, your hinge. You could see right here, her hips are low to the ground, her knees are bent, and she has got flexion out of her ankles, her knees and her hips. Here for our hip-dominant exercise, her shins are vertical, you have slight flexion in the knees, and her hips are back towards the back wall. I would cue that try to push your butt back and hip of the wall, okay?

Along the lines of doing hip hinges, you also want to make sure that they are not just bending over. A lot of athletes will bend over instead of hinging. That's something you have to pay attention to. Nice strategies to work on that with all my athletes. Then you get two kinds of the fun stuff. After keeping it super simple and you got a good functional system going that makes sense, and your athletes are doing exercise safely and they can progress, we can do some more fun, exciting things. You have your explosive exercises for power and some quickness; you have clean, snatches, kettle bell swings, and these are just some things that I do with my athletes. Sleds are great for power, I used med balls every day. My athlete -when they are in the gym, they are going to hit the med balls every single day, no matter what. We are going to do a rotational throw, we are going to do a slam and we are going to do a chest throw. We do those two things every single day. That would be light, implemented power work. Then you have your box jumps, step jumps, and just lots of jumping. You could use the barbells and do some more heavy, Olympic lifting type stuff, but I'm not going to run through that stuff with my athletes, unless we have the time and space- which we don't.

Currently our athletes have an opportunity to work on heavier hang cleans and snatches. They are going to a CrossFit gym down the street and gasp, "CrossFit." I know, it is scary. Some people love CrossFit and some people hate CrossFit. I personally don't love CrossFit myself, but I think because it is such an 'up in the air thing,' where you could go to a CrossFit gym and have a wonderful experience and be treated really well and go through their exercises program and be safe or you can go right down the street and go to a gym and they are screaming at you,

"Go harder," and you hurt your back because you try to go harder because somebody was yelling at you, it is interesting. But, we are at Mission CrossFit and Justin is the owner, and he is absolutely amazing. He takes care of our athletes and he's got this whole gym, it is his thing. So, our kids come in and do 'swim strong.' He has a very slow quick approach, which is just the way I like it. He is teaching them the skills to be able to do hang clean and snatches, and some of those Olympic lifts that are going to carryover to when those kids go to college. That's a real benefit to our program. It is something that Coach Mark somehow pulled out of thin air. One day he is like, "I got a gym we can work with," and I was like, "Sweet."

In fact, a lot of our kids from the entire program will go there. And again, I am like, "I don't want my little kids doing crazy stuff," and that's not what they are doing. He is very athlete-developmental and he works with me and Coach Joey and all the coaches to make sure that the kids aren't doing anything stupid and he is amazing with it. We can go past some of these exercises that are amazing and go to some more explosive work with heavier weights, but basically our goal with this power stuff is to get triple extension. When we are pushing off a wall, after a flip turn, or when we are jumping off the block, or getting into the wall, those are the times that matter the most for explosive power. Everything else, just swim really well and you'll get faster, but these make a difference.

Triple extension is where we want to get an extension of the ankle, extension of the knee, and extension of the hip. Essentially you see him pointing his toes as he jumps. They will do like three or four, and then we will stop, take a nice rest; I don't want them using weight that's super heavy because I want maximum speed on this jump. Here we have the Chinese National team that I work with. My buddy Alex's gym in Irwin, and he lets me use his space for athletes and general population clients, and I had the Chinese National team in there, and it was amazing.

We are doing basically a 'flip turn box jump' is what I call it. Same concept as the regular jump, but you are coming off of a box and you are rolling into a jump. Something similar to a flip turn. Okay, then you have your basic snatches and cleans with a dumbbell, which are a lot easier to coach than with a barbell. Okay, and this girl came from another program before she was at Nadadore, and she came in and she already knew how to do this. I was excited and I talked through a lot about the things that she did there. Everything was fast and powerful

over there and I love that, but she was already like ready to go, to do all this stuff. She had good technique, and she had a lot of work behind her.

Then, this one is a swimmer star with TRX or suspension trainer. By the way, those are \$35 on Amazon. TRX like \$130. Swimmer starts are great, I am going, take your mark position and get their chest on their knee, all right, something like a position that they would be in on the block. I have them put them back foot where they would typically have their back foot on the block. Then explode, the idea again is get the chest up off the knee, get the hip to extend. The same way you see those athletes jump off the blocks and they don't fully extend their hip and they are not getting the distance or their ankles aren't pushing off, this is what we are going for. Triple extension and this is a very specific type of movement right here.

Then we have our medicine ball work. We have a rotational throw coming from the side or a lateral throw. This is more of a complex movement, usually we will just have them in a half-kneeling position, on one knee and they will just throw keeping their hips stable and working on the rotation from the upper T spine. But she was very athletic and she would always pick the ball heavier than the boys, [LAUGHS] she would make fun of them. She is like, "You got a 10-pound ball, I got 12; you suck."

[LAUGHS]

Then we have some basic chest pushes, and again, I like to make our medicine ball work a little bit more like what they are going to be doing off the block. Just launch off of that back foot. So, take your mark, go! Get them to jump as hard as they can, get that triple extension from the back and follow through with the explosive power from the front. I am just using different implements and different tools. We have a sandbag. I think if the team could afford it, they probably should get like 50 sandbags. They are amazing. Ultimate sandbag is awesome. DVRT is a great program. Josh Henkin invented basically the ultimate sandbag, and he is a great functional trainer.

Then we have sleds and sleds can be used from things than just pushing. I have these guys doing some backstrokes starts, essentially, is what I call them. Backstroke starts are going to get in that row position and just drive that sled. But, they are also driving from the hips and getting that triple extension. That was the goal. Everything is about explosive, fast, hard movement, but again, these athletes did not get here without the foundation. I would never allow them to do some of these exercises had they not been able to

put together the proper hinges and squats and exercises that came from those movement patterns.

Here are your aquatic postures. This is one of the things that I have most fun with; I probably spend 50% of my dryland doing something on here. Bird dogs, dead bugs, bear crawls, those are basically what I use for core stability and awareness. Get the kids to understand, is their back arching? Are their backs rounded? Get their spine to stay in that neutral position while they are moving body parts. That's a big thing with me. I will say planks with moving parts, or something like that, to make sure that they understand we are keeping the core stable and we are allowing the other parts to move.

Anti-rotation press: you don't have to stand, but what I want you guys to do is put your hands like this in front. You could take turns with somebody right next to you, and put your feet on the floor and sit up, and have somebody just gently push on your hands and resist. Push a little harder, but don't break them. Do you feel your core engaging and do you feel everything getting a little tighter? Do you feel your glutes tightening up, your hips, your obliques, your transverse abdominis, your back, your shoulders, and your chest? This is one of the greatest exercises that you are not probably doing with your athletes, an anti-rotation either press or hold, and you can do with a partner. Stand up. How are you doing? What's your name?

Male Speaker 2: Taric.

Bryan Dedeaux: Taric. Hands up, all we are going to do is push against each other and just hold. Where do you feel that?

Male Speaker 2: I feel it here actually.

Bryan Dedeaux: Yeah, you know where I feel it?

Male Speaker 2: Where?

Bryan Dedeaux: All the way down here, my foot. It goes all the way up the hip, right. You can do very simple things like that to get your kids working. I mean, you need no space, except for the standing space that you have to do something like that.

Anti-rotation presses or holds and you can also add a half-kneeling or standing or single leg to make it more challenging. Again, progressions and regressions. Farmers carry for core strength and stability, that's just picking something up really heavy and walking with it. Good for grip strength, which swimmers need. Suitcase carry, anti-lateral flexion or ex-

ension, and side planks. I never do side planks just sitting here. They are always moving the other arm or the leg; planks with moving parts. Typically, they are going to be doing a row with a band, or some sort of pull or they're going to have a slider and they are going to slide under them. They are going to do something, but not just a plank. Those are anti-lateral flexion and extension exercises. You have your anti-extension exercise, where you are trying to get your body to not just cave in when you are not in plank position. So, a plank would be an anti-extension exercise and then a roll out would be a good progression from that and a body saw would be even a more challenging progression, and I have got some videos of those.

You are talking about the entire core, not just your abdominals. That's why we have to educate. We have a bird dog up at the top. The video is going to play in the opposite order, so we will go that way. So, this is a combination of a row and a bird dog. You have a bird dog row here, where they are trying to keep this spine neutral while their body parts are moving. You want a nice straight line from the back of the head, down the butt, and into the heel while they are moving. This requires a lot of core strength and balance and stability. Their rotary stability is challenged quite a bit on this type of exercise.

Okay, and you have your half-kneeling version. Now, this is a half-kneeling, anti-rotation press. Not only is she getting the anti-rotational forces from the band that she is holding in; but look at her bottom knee, it is not touching the ground. She is in a split-stance position, so it requires a lot of balance from the ankles and hips and a lot of core stability and those anti-rotational elements make that a fantastic exercise. But they didn't do this right away, they did a lot of half-kneeling exercises, anti-rotation, and then they also did a lot of split squats so that they could understand the movement and own the movement. They had to grove the pattern and get used to it, so that they could own that position, which is very challenging. By the way, if you try that, it gets really hard. Then if you really want to mess with them you go and you mess with the band and the band is wobbling they are just like, "What? I hate to go to Bryan."

Okay. This is a simple dead bug, so I had them engage their core. Right there, their tummy is tied up. They bring their ribs closer to their head bones, and just hold that position. It is kind of like a hollow hold position in gymnastics. They keep their spine as straight as possible and then, you extend the limbs. You can do a lot of different things with the dead bug,

but this is great for awareness because a lot of times what happens is they stick that leg out and their back arches. I have them put their fingers underneath to make sure that their back is nice and tight, and then they can start doing the exercise.

Okay. This is your basic bird dog. What you want to see is that they are not wobbling side to side. You don't want to see the arch in the back, you want them to squeeze the glute, and you want them basically to radiate all the way from the heel. This is from when I coached 11 and 12's a couple of years ago. I would probably have them squeeze their fists to create tension into the shoulder and all the way through the body, and not only just put the leg back, but kick the heel and drive the heel back. They are not just putting the leg back and putting the hand in front, they are going to squeeze creating that nice tension all the way through the body.

We have some other exercises. These are the National team kids, again planks with moving parts. We just don't do planks by themselves, the little kids will; with some of the little kids you have to teach the plank first. It is regression or a progression, but once we get to this level, we are done just standing in a plank position or sitting in a plank position for 10 minutes, which doesn't make sense. We have a more challenging version here. You get a kettle bell, you stick on a slider, have it move it up and down. Again, their scaps move up and down too, so they are working on a lot more than just core stability.

Then this one is awful and evil; don't try it, I would never. It is very hard. Okay, this is Menzi just showing me that he can do better than I could. I did like three of them. I am like, "Yeah, look at me," and he went and he did like 20. Like I said, I had the Chinese National team and none of them could do it once. It took them a long time to learn that pattern. I had them for like about 12-14 weeks, and by the end of it, some of the athletes could do it. But, that's no joke for sure. Okay. Now, this is not one of my swimmers, she was my swimmer when she was in the 11 and 12 group. She is her 30s now and she is one of our staff. But, I coached her Monday, Wednesday and Friday in the weight room to get her all strong. She does the same stuff. Okay, so that would be your side plank with the row.

Okay, and we have the Bulgarian split squat and the Turkish get up. We have weird names for exercises, come from some Eastern European countries. I am claiming this one, the French press, I made this up. I have not seen it anywhere on Instagram or YouTube. Kettle bell, anti-rotational element, neutral spine,

funny look at my face, funny shorts. If we are not teaching more than just dryland and things on land, we are missing the boat because there's a lot more to strength training than just push-ups, squats, and movement patterns.

I teach my kids about nutrition and how that affects not only their swimming, but how it affects their strength training and their dryland. I think it is extremely valuable to give them the tools in this category that they are not getting from school and that they are not getting from home. Fad diets versus sports nutrition; that's something completely different. Lot of my kids would go home and they will be like, "I can't eat carbs because my mum and dad don't want me to eat carbs," or "My mum and dad don't eat carbs because they are trying to lose weight," and even myself, I am like, "Oh, I can't have any carbs because I want to slim down." My kids are listening to me, but do you think not eating carbs is a good choice for our swimmers, which is the primary source of fuel? We need to differentiate between what society and media is pumping out there, and what actually works for athletes because sports nutrition is not the same as, "I need to lose couple of pounds." It is not the same thing; it is not. Fitness and sports are not necessarily the same thing. Think about it.

The role of carbs- you have got to teach them that carbs are there source of fuel and if they limit their carbs, they're going to limit their source of fuel and they might be running on empty in the middle of practice. How many of you guys have those athletes that are just sluggish and tired and you just can't figure out why because they are great swimmers? You go to talk to mum and dad, "Oh, they haven't been eating a lot lately. I have got them on this diet because I am worried that this is affecting them," and I'm like, "What diet?" "I don't know, they are not just eating anything." No carb, helious/ keto/whatever diet. You have to educate the parents, as well.

The role of protein and how that helps, especially after a weight room session. How that can help them recover for the next session. Nutrient timing, and making sure that they do get their fuel in right after the workout- whether its protein or carbs. Make sure that they understand that those two macronutrients have to be in there, both carbs and proteins as soon as they are done with the weight lifting session or any training session. Maybe a little more protein for a weight training session than regular, but bottom line is protein just needs to be balanced throughout the day for it to be effective. You don't need to throw in 50 grams of protein right after your weight training session because that much isn't going to do anything. Okay, so

for women, it is typically around 25 to 30 grams; for men; it is difficult around like 30 to 40 grams. That's going to be good. Anything after that doesn't help. It is not going to make you any bigger, stronger, or better. It is important for them to know. I saw this coach, from another team post something on Facebook. He is a friend of mine, I love him; but he had like a giant cheeseburger and whole bunch of like chicken and he is like, "472 grams of protein baby, I am going to get ripped." I mean like "What? No!" I got to talk with him, [LAUGHS].

Refueling and hydration, do they hydrate properly? These are all things you probably already do as a swim coach, but how do they relate to the strength training and the dryland? Supplements: making sure they understand that some supplements are probably not a good idea. Probably all supplements are not a good idea unless you really need something and there is some sort of deficiency that your doctor said, "You are low on iron. You need to be taking iron." Protein is probably all right, but educate yourself first on supplements and what is appropriate for your athletes and educate your athletes as well.

Recovery and nutrition, we just talked about that. Make sure they understand how nutrition plays the role in recovery. Sleep, if they are not getting enough sleep, they are not getting anything done. I posted something on Facebook for swimmers about how important sleep was and why as a community of coaches, we feel that getting those extra 3,000, 4,000, 5,000 yards in the morning at 4:00 or 5:00 AM is more important than letting their brain and body regenerate and recover. I don't know. I coach 9 and 10-year-old. I am not going to touch that one. But, they need to sleep. There is proof all over the place. There is science everywhere that says, "You need to sleep to get your gains. It is not just meathead thing. "You want gains, you better sleep." That's when your body does all the regeneration and all the rebuilding of soft tissue and myofascial release. Self-myofascial release, is like when you get your foam rollers or you get a massage.

Proper warm downs and diaphragm breathing. This is another one I am really, really big on, especially for the older kids. When they come to the swimming pool and they have had a long day and they are stressed because they've had tests, you may want to roll them through a breathing technique to get them to turn off their sympathetic nervous system to get them to calm down. The central nervous system recovery switches off. If you get them to do some deep belly breathing and exhale, it is the exhale that matters; it is not the inhale, it is the

exhale. Getting that diaphragm to relax because the diaphragm is always working. If you can exhale and get that good, deep exhale, that's where your parasympathetic kicks in and allows you to relax a little bit. It gets you to calm down, turns off the brain just a little bit. It also relaxes that diaphragm, which is the only time it can done and be relaxed. Then, it is attached all these other muscles. You might have back relief, if you have back pain; if you work on deep exhaling and your breathing, you can relieve some of that pressure. So, breathing is very important. I do it after every strength training session. If we are in gym, we are breathing after because 20 minutes after that, they're right in the pool with Coach Mark Schubert getting the crap kicked out of them. They need to find a way to recover quick and be ready for the next exercise and the next bout. Stretching and mobility can work; you can check it out trello.com/dryland and you can check out what I have out for the Nadadores. It is 90% complete, but there are a bunch of exercises in each one of these categories that the coaches can pick and choose from. Some I have videos for, others I don't because I realized how much time it took to actually do this. Cutting and pasting and editing and filming video is extremely challenging; it takes time, but I have got a lot of stuff on there.

This is what it looks like in aquatic posture. I got my 8 and Under squads, I have my 9s, 10s, 11s, 12s, 13s, and 14s, - essentially, you have a giant regressions and progressions page right here. So if you have a 13-14 and they are coming in and they have never done any dryland at all, never even done a plank and they are coming into program and you expect them to do this wicked dryland that everybody else is doing, if you have a regression system like this, you can bring them back all the way to the planks. When they get better at planks, you can do planks with moving parts. In planks, start touching their shoulders, start releasing the leg, and then they can start doing planks pulling bands and then they can go to a stability ball roll out. Then they can go to a slight body saw and then all of a sudden, they're able to do, ab wheel roll outs. But, that's going to take long time. You don't want to do ab wheel roll out for 13-14 years old who has never done a plank. You are going to hurt him, so you have got to be careful.

I really appreciate you guys listening and staying engaged and paying attention to what's going on. ■

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# NO SIMPLE ANSWERS

By James E. Counsilman, Ph.D. and Brian E. Counsilman, M.S.  
(Reproduced from Swimming Technique Magazine, February-April 1990)

At the recent American Swimming Coaches Association World Clinic in Pittsburgh, we talked with many coaches, including national team director Dennis Pursley, Mark Schubert, Lars Jorgenson, Dick Shoulberg, Randy Reese, Nort Thornton, Richard Quick, George Haines, Peter Daland, and others, all of whom expressed alarm at the continued publication of articles, which advocate a reduction in training volume for swimmers and claim thereby to produce faster times through a combination of low volume with high intensity. We think it can fairly be said that a crisis point has been reached within the swimming community on account of these articles. Coaches who have had a lot of success with proven methods have become fearful of the effect of these articles, especially on impressionable young coaches, who would like nothing better than to be able to use these simplistic methods and produce world champions. Low yardage and high intensity are relative terms susceptible to wide interpretation. For the purpose of this discussion, low yardage will be considered as distance per day of 4,000 yards/meters, compared to an average distance per day of national qualifiers of 12,000 yards/meters. High intensity will be considered to be efforts that are above the anaerobic threshold. The contention of less-yardage proponents is this: A swimmer can get in shape better by training at sprint or high intensity levels over less yardage than by training conventionally in an integrated program. In the conventional or integrated program the various methods of overdistance, interval training, sprint training and so on are combined into a workout schedule that varies widely and progressively over the course of a season, a year, or any given time period even including a consideration of the swimmer's total career. First, it seems important to point out that the low yardage, high intensity type of program is not new. Far from it. It has been tried in the past by many coaches and swimmers, going back as far as Johnny Weissmuller. We have tried it, as have our friends Brent Rushall and Jim Montrella, to name a couple that we know of personally. Most of us abandoned it after a season or two of experimentation. Why? Because we got poor results. On the other hand, some current coaches have reported favorable results, among them Don Watkins. <sup>1</sup> Several teams in the Midwest whose coaches we know personally have also adopted the program. They report good results early in the season, particularly in the short distances, but their times have not dropped significantly at the end of the season. On an average

their distance swimmers showed a decrease in performance from the beginning of the season onward. The use of an integrated program, especially the aspects of aerobic work, referred to as overdistance and interval training, prepares what many coaches refer to as a base upon which more intense work can be superimposed. The low-yardage/high-intensity method is obviously an attractive concept. If it were effective, it would mean far fewer hours spent at the pool and far less volume in the water. In one recent paper a proponent of this method noted that Vladimir Salnikov, the great Russian Olympic champion and world record holder in the 1500 meter event, had adopted the low-yardage/high-intensity program. It is true that Salnikov tried this type of training, leaving his traditional coach and announcing that he intended to train only 20-30 minutes a day. He said his wife would be his coach. He proceeded to figuratively smell up the pool. After repeated failures, he returned to conventional training methods and went on to win the gold medal in the 1500 meter event at Seoul in 1988. Recently, Salnikov was appointed national coach for the USSR. He stated that many Russian swimmers were lazy and, if they expected to reach world class, would have to stop looking for short cuts and get back to hard work. Clearly he ended his career with the same conclusion that many of us have also reached: there are no short cuts to good swimming condition, particularly for the distance events.

Table 1 is a single day's sample workout in Salnikov's regimen, as presented by his coach, Igor Koshkin, at a clinic in Australia in 1986. <sup>2</sup>

The Training Program of Vladimir Salnikov	
<b>Attack Mesocycle - Week One</b>	
(all distances in meters)	
<b>Monday A.M.</b>	
1. 2000 free, alternate (1500 free/500 free), rest 15 secs.	
2. 5 x 200, odd numbers IM easy, even number free with donut, paddles, FAST	
3. 3 x 1000 free, progressive, rest 20 secs.	
4. 3 x 300 IM on chest, on back, over 50 m, EASY plus 200 kick, free, in four positions.	
5. 3 x 500 free, interval training, rest 25 secs.	
6. 5 x 200 easy, odd numbers on back, even numbers IM kick	
7. 50 free, for time, from push-off	
<b>TOTAL: 10 km</b>	
	<b>Monday P.M.</b>
	1. 8 x 600 free, rest 15 secs. (Odd number stretch on 25 strokes, paddles, even numbers stretch on 30 strokes without paddles)
	2. 300, 2 exercises free, paddles, middle tempo
	3. 800 free, rubber, resistance 17 kg.
	4. 600 IM on chest, on back over 50 m, EASY
	5. 16 x 50 free, sprint on 50 secs.
	6. 700 other strokes (backstroke) EASY
	7. 5 x 400 free, pull, kick, paddles, pull-buoys, tubes or drag suits, FAST, odd numbers pull, even numbers kick.
	<b>TOTAL: 10 km</b>

Table 1

It is a typical integrated workout, which illustrates how little sprint training is used by a premier distance swimmer. Most work is done aerobically on or near the anaerobic threshold level. On this day he trained a total of 20,000 meters. These workouts were executed on the first day of his “attack meso-cycle,” which is the most arduous of the training cycles. Such workouts are not used at all by sprinters or middle distance swimmers. In the opinion of the majority of successful coaches, it is far better for swimmers to base their programs on sound concepts, which have stood the test of time, rather than to rush to adopt unproven methods and suggestions, which could possibly have emerged from misinterpretation of the principles and research that supports them. We believe that is the phenomenon with which we are dealing now. We base that belief on the fact that the same principles are being cited as evidence to reinforce the low-yardage/high-intensity concept as I have used to support quite different claims. Bias affects most people’s judgment. All of us tend to justify our particular position via the rationalization process. We find it next to impossible to remain objective, tending to present only the information which substantiates our beliefs and to dismiss, misinterpret or denigrate the information that disagrees with our position. This is the primary reason that disputes such as the one confronting us now have arisen in the competitive swimming community. To combat that tendency, we propose to examine the controversial methods in terms of the following criteria: how the champions and elite swimmers actually train and whether or not the low- yardage/high intensity method conforms to commonly accepted principles of training. (For the purpose of this study, elite swimmers were those who had either achieved the NCAA Division I qualifying time standard or the Olympic Trials qualifying time standard.) A large number of the champion American swimmers and/or their coaches were interviewed at the 1987 USS Long Course Nationals concerning their training regimens. Following is a list of the average distance swum per day, plus the number of workouts per week at the height of the training season:

Number of workouts/week 10.2 avg.

Two workouts/day 12,064 avg. meters

One workout/day 7,882 avg. meters

A similar study was conducted by Peter Daland and Ernie Maglischo<sup>3</sup> during the European Championships in Strasbourg in 1987. The results were much like those of the 1987 U.S. Championships. In neither championship event did a single swimmer use the low-yardage/high-intensity type of training. It is apparent that elite swimmers are using the methods that are supported by the training principles that will be described in the next section of this paper. Those who advocate low-yardage/ high-intensity workouts have resorted to two tactics to support their claims: first, that the bulk of exercise physiology research reinforces their position. Second, that the three universally accepted principles of specificity, overload and reversibility support the concept of low-yardage/high-intensity training. There is a real problem with the first claim. There is such an enormous body of research from which to choose that a person can find information to support his claim and can ignore what refutes it. The success of the second tactic stems from the person’s selective interpretation and/or

misinterpretation of the three principles of training. The principle of specificity, which states that adaptation is specific to the stress applied is being interpreted by such writers to mean that all training should be competition-specific, that is, at race intensity. The principle of overload is being interpreted to mean that the intensity of training is the only assuring (contributing) factor to overload. The principle of reversibility is being interpreted by these writers to mean that no residual effect exists; that is, that maintenance and rate of detraining and retraining are the same among all athletes regardless of previous training background.

### **The Principle of Specificity**

Sports training scientists and coaches realized some time ago that the principles of specificity, overload and reversibility could be misinterpreted. They deemed it necessary to develop secondary principles that would clarify the conceptual foundation of sports training. Such attempts produced the principle of gradual systematic training, the principle of uniting general and specialized training, the principle of maximal loading, and so on. Thus, the principle of specificity is more clearly defined by the principle of complexity of training. Ushered by the landmark study of Viru, Urgenstein, Pisuke (1972),<sup>4</sup> it was determined that one type of training method or exercise does not have a maximal effect on one, or, at most, a few physiological parameters. The Viru study also determined that a training method or exercise may also have a negative effect. As a result of this study, which greatly influenced Soviet sports training regimens, it was determined that in order for training to have a maximal effect on all functions, a complex regimen, utilizing the proper and systematic dosage of all training methods must be constructed. The dosage and distribution of each method or exercise throughout long-term training depends on the different rates of adaptation of each of the leading functions. This is defined as the heterochroneity of training and was explained by Volkov:<sup>5</sup>

“The adaptive changes that are connected with aerobic capacity take place slowly and require a long training plan. Adaptation in the synthesis system of specific proteins, which provide high contractile capability in muscles, is just as slow. But, when developed as a result of training, these changes are maintained at a given level for a long period of time. Biochemical changes associated with the glycolytic anaerobic process develop much faster under the influence of physical loads. But they are lost just as fast after cessation of training. This peculiar feature of biochemical adaptation to physical loads should be studied both from the standpoint of the dosage of training loads and its distribution throughout the different stages of training.”

The principle of complexity provides a more complete explanation of the principle of specificity, which is that the adaptations taking place are specific to the nature of the training or exercise used, and not that all training should be competitive-specific. It has been shown in studies too numerous to count that sprint training has decidedly different training effects than endurance training. This does not lend support to the idea that sprinters should only sprint. By the definition of specificity, the nature of anaerobic training loads would indicate that they enhance anaerobic performance, but increased anaerobic performance alone has limited benefits. A swimmer who specializes

in the 50 and 100-yard freestyles not only needs high anaerobic capability, but also a high anaerobic threshold in order to delay the onset of blood lactate accumulation during competitive performance. Endurance training has been shown to have a maximal training effect of decreasing blood lactate accumulation during exercise, thereby raising the anaerobic threshold.<sup>6</sup> Sprint training has been shown to have a minimal training effect on reducing blood lactate accumulation during submaximal exercise. It follows, therefore, that a balanced program of both endurance and sprint training is required for the holistic development of competitive performance. According to Harre,<sup>7</sup> endurance training is best realized through the use of high-yardage/low-intensity training, while strength and speed are better trained through the use of low-yardage/high-intensity training. This seems to be the consensus of opinion.

### The Principle of Overload

From the outset, it should be understood that much of the controversy discussed here stems from a dichotomy of terminology. Overtraining, in the sense that it is used by coaches and sports training scientists to describe the progressive process by which the overload principle is developed, is beneficial and even desirable. The problem arises when the same term is also employed to describe intensity and duration of work to the point of failing adaptation or exhaustion, or, which makes it even more confusing, to describe a point beyond which training is useful. Any attempt to discuss the subject rationally tends to get mired in the terminology. For the purpose of this paper, we propose to offer the following terms:

1. Overtraining will mean the careful process of manipulation of intensity and duration to the end that successful adaptation occurs repeatedly during the course of any given training period (season, year, or career).
2. Overwork will describe my opposition's concept of a point beyond which no manipulation of volume will improve performance.
3. Stagnation (or maintenance) will refer to a point at which performance reaches a plateau beyond which it cannot progress without manipulation of either intensity or volume.
4. Staleness will describe failing adaptation.

This term is not a perfect choice, inasmuch as staleness actually

comprises other factors, both psychological and physical. The fact that a more precise term has not been found gives some idea of the complexity of the issues. That is because failing adaptation can be precipitated by such factors as lack of proper rest, inadequate diet, stresses in the athlete's environment, or improper manipulation of the intensity/volume aspects. According to the more popular exercise physiology texts, the intensity of exercise is probably the most important factor with respect to overload. The term "intensity" is used by both exercise physiologists and sports training scientists to explain changes in energy expenditure over the aerobic/anaerobic continuum. In sports training rhetoric the first two zones of the five zones of intensity are described as the aerobic zones, zone 1 referring to compensatory efforts or very low intensity aerobic (that is, warmup, loosen-down, easy swimming, and so on) and zone 2 to aerobic efforts below the anaerobic threshold (that is, high-intensity aerobic). Even higher intensity exercise goes beyond aerobic effort to describe anaerobic threshold and anaerobic glycolytic and anaerobic alactate work. It must be remembered that intensity can be misinterpreted, when distinctions between high-intensity aerobic and anaerobic efforts are needed (see Table 2).

In sports training, the proper application of the overload principle of training is more completely described in the principle of progressive increases in the training load. In order to ensure that there will be a progressive heightening of an athlete's training state, there must be a careful manipulation of not only intensity, but also the duration and frequency of training. In the study of the dynamics of the training load, it has been assumed that, if the intensity of training is high, the duration of training is low within each training session. The continued use of high-intensity training, it is reasoned, must include the use of continued low durations of training. The exclusive use of high-intensity training has been addressed in the so-called East German principle of repetition, also known as the Soviet principle of maximal loads. It states that, after a certain amount of intensive training, a performance plateau with respect to strength, speed, and endurance, and technique of various motion patterns is reached. A further improvement in performance is only possible through more repetitions (volume stimulus) either in the form of more days of training per week or more repetitions per day, or by shorter breaks between repetitions (density stimulus). These changes in the loading factors lead to a progressive increase in the total work load and to an

improvement in conditioning. Further elaboration on the principle of repetition has been noted by Volkov (1974),<sup>8</sup> Taylor (1975),<sup>9</sup> Harre (1982),<sup>10</sup> and Bompa (1983)<sup>11</sup> to the effect that a training load which remains unchanged and produces physiological changes early in the season will not produce further changes later on (stagnation). This means that, if the content of each successive training session remains the same throughout the season, continual improvements in performance will not occur. In low-yardage/

Stages of Relative Training Intensity				
Stage	Type of work	Sources of energy	Pulse rate	Lactate (mmol/L)
1	Easy swimming	Aerobic	120-140	20
2	General endurance (first level)	Aerobic	140-160	2.0-4.5
3	General endurance (second level)	Aerobic/Anaerobic	160-180	9.0
4	Specific competitive work	Anaerobic (lactate)	Max (210)	Max (22.0)
5	Sprinting	Anaerobic	—	—

Table 2.

high-intensity training, how does the content of each workout change to ensure increased training stimulus? The writers who advocate this type of training have given us nothing but sample workouts and have offered little insight or suggestions about long-term planning. How exactly does low-yardage/high-intensity training change in content season by season, year by year? Can continued adaptation be expected from workouts that remain 3,000-4,000 yards or meters per day throughout an athlete's career? The best that could be hoped for is training maintenance. If the principle of progressive increase in training load is adhered to, do the advocates of low-yardage/ high-intensity training believe that intensity is the only variable that changes when increasing training stimulus? The result would be a chronic and excessive use of maximal loads, leading to failing adaptation or a disruption of training to allow long recovery periods. No matter how you look at it, the only logical outcome would be training stagnation, not improvement.

### **The Principle of Reversibility**

Currently, exercise physiologists contend that maintenance and the rate of detraining and retraining are unaffected by previous sports training, that is, that no residual training effect exists. This opinion is offered by the advocates of low-yardage/high-intensity training methods to prove that athletes do not develop long-lasting training effects, often described as a training base. It is supported by studies in which subjects training on cycle ergometers, tread-mills, or use walking or running programs. The subjects who participate in these studies are loosely described as trained and untrained. It is here that the truly inherent flaws in exercise physiology studies are most apparent. First, the type of exercise and training regimens used in these studies are nonspecific to the physical and neuromuscular demands of the sport. It has been established by the exercise physiology community itself that cycle ergometer and treadmill cannot be used to predict the fitness indices of swimmers in swimming (Holmer, 1974).<sup>12</sup> Second, the subjects normally used in exercise physiology tests are usually non-elite athletes. Even if elite athletes who have large training backgrounds were compared with untrained subjects, the non-specific testing protocol would be useless in determining maintenance, detraining and retraining specific to their sport. Third, exercise physiologists often select a limited number of variables, which may or may not be present. If no changes in the measurements of these variables occur, they conclude that no changes have taken place. The problem is that this procedure ignores the possible changes in variables they have not measured. Any significant studies on maintenance and the rate of detraining and retraining must use testing and measuring protocol specific to the sport, make greater use of elite performers as test subjects, and refrain from making sweeping conclusions they lack the research capability to support. They must also acknowledge research which refutes their opinions. In the case of the residual effect of training, it is true that there is very little research that demonstrates its existence, yet it is a phenomenon that is well known to sports trainers, who believe that proof of it will be found as technological capability grows. Meanwhile, a good study that suggests its existence is by Coyle, et al.<sup>13</sup> Seven endurance exercise athletes (runners) were studied 12, 21, 56 and 84 days after cessation of training.

It was found that endurance exercise training induces an increase in maximal stroke volume and cardiac output, as well as in capillarization and respiratory action of the skeletal muscle. While there was a reduction in the maximum oxygen uptake in the detraining athletes after 84 days of training, the athletes retained a higher maximum oxygen uptake than did the sedentary control subjects (50.8 versus 43.3 ml kg<sup>-1</sup> VO<sub>2</sub>). We consider the next finding to be of great importance: skeletal muscle capillary density did not decline with inactivity, remaining fifty percent above that of the sedentary control. This is the type of study we need to pursue. It gives credence to the concept that aerobic training has a significant residual effect and it provides an estimate of what those effects are and how long they last. As mentioned earlier, the term overtraining is being used by the advocates of low-yardage/high-intensity training to describe what is being done by most of our athletes at the present time. This is a departure from its accepted meaning. They contend that overtraining is the continued use of training beyond any useful benefits. Dudley, et al.<sup>14</sup> is cited to confirm this notion. It is our belief that Dudley's results have been misinterpreted, as has the concept of overtraining. Thus, it is here that we choose to substitute the term "over-work" in order to differentiate between these terms. That will leave inviolate the accepted meaning of the term, which does not include the idea of exercise beyond a theoretical threshold of training benefits.

According to most sports scientists, overtraining may comprise some chronic flaws in the long-term training process that may lead to failing adaptation and long-term decrease in athletic performance, but, according to Bompa,<sup>15</sup> these are usually associated with prolonged and over-extended use of maximal training stimulus. Therefore, the main controlling factor that brings about overwork is usually the intensity of the training stimulus, not the volume of work.

Another training factor that has recently emerged within the controversy of overtraining is the frequency of training. Considerable discussion has been devoted to how often a swimmer should train per day. The controversy has been precipitated by Costill's<sup>16</sup> study on muscle glycogen depletion during interval swim training. The advocates of low-yardage/high-intensity training have misinterpreted Costill's research to indicate that training twice a day will lead to overwork. This is based on the belief that complete resynthesis of muscle glycogen between training sessions is a desirable training effect. In fact, two primary agents of the stress which leads to physiological adaptation are low levels of muscle glycogen and high levels of lactate. Rather than expecting complete recovery between one training session and the succeeding one, it is considered a desirable effect to superimpose the stress of another training session before the body has completely recovered from the previous one, perhaps as often as twice or three times a week. Mat'veyev<sup>17</sup> describes three effects of training: immediate, delayed and cumulative. The immediate effect of training is defined as a decrease in work capacity, or training fatigue. The delayed training effect of the first kind is under-rehabilitation of work capacity, also defined as the after-effects of training. It is Matveyev's contention that progressive increases in training stimulus are to be executed in the presence of the after-effects of previous training. The delayed training effect of the second kind, which

is full restoration of work capacity, might be beneficial on occasion, but it is not considered to be the desired effect in gradual, progressive training. The controlling factor is the frequency of training, or more specifically, the rest between training sessions. If there is too much recovery between training sessions, the after-effects of the previous training session are lost. Under these conditions the best possible long-term result would be maintenance, not improvement. Nowhere in his article does Costill say that incomplete recovery between two training sessions per day causes overwork. He simply states that the depletion of muscle glycogen and rate of resynthesis might be used as an indicator of work tolerance among athletes. This would indeed be useful, but would provide no new insights to long-term training changes. Unfortunately, Costill made the following statement, which can be interpreted incorrectly as applying to elite and non-elite swimmers alike:

“These data provide a better understanding of the impact of interval training on muscle glycogen reserve, and to the risk of low muscle glycogen when swimmers train twice per day.”<sup>18</sup>

This indeed could be true, depending on the level of the swimmers. The subjects in Costill’s group were not elite swimmers and perhaps did not have the training residual to tolerate hard training with impunity. We believe that the intelligent application of the principle of progressive overload, in addition to the use of an integrated program will permit any healthy swimmer to adapt to training twice a day. (As discussed earlier, most swimmers do not train twice a day, every day of the week. They do train enough to translate into 9-12 sessions per week.) It is common knowledge among coaches that athletes of non-elite status and/or in poor training condition at the beginning of the season will indeed go through profound initial decreases in work capacity and will require longer periods of rest and recovery, than would be normal in the trained, elite swimmer. But, as conditioning improves, the athlete, be he elite or non-elite, will adapt and recover more quickly from the training stimulus and will be capable of increasing the frequency of his training bouts. The simplistic notion of increasing intensity with each successive training session would eventually lead to overworking. Any additional training stimulus will have to come from increasing the frequency of training, if progressive increases in training are to occur without the overuse of maximal training loads. It is also important to repeat that other factors, such as lack of sleep, poor dietary habits, emotional problems, use of alcohol, illness, and so on, may contribute additional stress factors that can lead to failing adaptation. Elite athletes are usually more willing to make the necessary sacrifices to eliminate these extraneous stresses than are non-elite swimmers. Although we have not discussed multi-year training plans, we want to mention that they typically suggest an increase of both the volume and overall intensity (demand) of training. Nevertheless, this does not justify an unstructured use of high anaerobic loads. Although multi-year plans advocate a continually changing content of training, there are repeated consistencies in the distribution of high-intensity training loads each training season.

Training systems identify the practical realization of training load distribution over a given time period. The training systems described in the literature include such types as multi-method, integrated or complex, linked-successive or conjugative-successive training systems. Regardless of the training system advocated, all of them make sparing use of anaerobic training loads.

Lastly, we would like to present another clarification of the terms, which have caused so much disagreement between sports training scientists and exercise physiologists. Jay Kimiecik has presented these insights in an article in *American Coach*.<sup>19</sup> These ideas are presented graphically in Figure 1.<sup>20</sup> Mr. Kimiecik quotes Steve Fleck, exercise physiologist with the USOC: “The problem with a concept like overtraining is that no one knows what overtraining is, no one knows how it is defined. Researchers studying overtraining can’t compare results because each researcher is defining the concept in a different way.” Jay Kimiecik states further the opinion of Bill Morgan, of the University of Wisconsin-Madison, “Morgan considers overtraining to be a prerequisite for peak performance and defines it as progressive increases in the training stimulus. By this definition, overtraining is a deliberate and planned process that all endurance athletes must go through to improve their performance.” It is important to distinguish between overtraining and staleness, although that subject goes beyond the scope of this paper. Staleness bears the psychological connotation of elevating boredom. The “I’m-tired-of-this; I-want-to-do-something-else” attitude. If overtraining is prerequisite to the acquisition of conditioning needed for maximum performance, is staleness also pre-requisite? Of course not. By periodizing training into daily, weekly, monthly and seasonal cycles, swimmers can vary their training programs in order that boredom can be avoided. Training routines composed of the various methods (overdistance, sprinting, anaerobic lactate training, interval training, and so on) not only have that advantage, but expedite the training process. The performance of nothing but low-yardage/ high-intensity training, if excessive, would not only become boring and perhaps give rise to staleness, it would fail to

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
Low int. Aerobic	Recovery	Recovery	Aerobic	Recovery	Low int. Aerobic	Interval or Fartlek
90-120'	45-60'	45-60'	90-120'	45-60'	90-120'	
	Anaerobic	High int. Aerobic		Anaerobic		
		45-60'				

Table 3.

develop all the qualities needed for optimal performance. Kinderman<sup>21</sup> has recommended that a weekly training cycle follow a pattern such as that outlined in Table 3.

Each session may include several methods of training. The primary type being emphasized in a particular session is shown in the appropriate square. Peak intensity occurs on days 2 and 5, when an

anaerobic lactate set of repeats is performed. These two training sessions are the most intense of the week and are always followed by a recovery session of low-intensity, aerobic training.

Summary Controversy has been rising within the competitive swimming community over the past few years on account of the advocacy of two forms of swim training which depart radically from traditional methods. They promise a Utopian scenario in which reduced time in the pool produces greater success in performance. The truth is that these methods are not new at all. Many programs, bound by the restrictions of low pool time, have used them throughout the history of the sport, hoping thereby to offset the lack of time in the water by increasing the intensity of effort. But the fact is that such programs do not produce great swimmers. The fact also is that, when a great talent begins to emerge from one of these programs, the coach must look for a program with more pool time in which to place his talented swimmer, because he knows it will otherwise wither and fail. Such programs never produce swimmers of the highest level. We have received dozens of letters and phone calls from these frustrated coaches, who, recognizing that something must be done, want to know where to send their particular swimmers, who have outgrown their particular program. We are sure we are not alone in receiving such pleas. Yet, incredibly, here we are, faced with the fact that some coaches have hopped on the bandwagon of an idea that promises more for less. A high-level program is not for everyone. Many coaches and swimmers are not in the sport for the purpose of reaching the top level. That is as it should be. The danger in promoting the less arduous and less time-consuming methods is they claim to be capable of producing top level performances and to be superior to proven methods. You can talk or write all you want, but

they aren't. Except for the performances of a few sprinters, who had already laid a traditional base, they have not produced a single high-level performance. We coaches are worried that, while our swimmers and coaches are being enticed by promises of less training time and less volume of training, the rest of the world will pass us by. In fact, the rest of the world has already begun to pass us by. The success we still enjoy is being achieved by swimmers who train conventionally; we no longer dominate the lists of the top-20 in the world as we once did. Some say that our loss of domination is due to the catching-up process on the part of the rest of the world, rather than a falling-back on our part. Sociologists would say it is the result of the loss of will that inevitably afflicts any affluent society and makes it prey to easy rationalization, but we don't want to get into that esoteric aspect of the question. We do want to say that coaches should take care before they adopt any radical departure from proven methods. It would be a step backward, instead of forward. Our young coaches have the responsibility for bringing along the swimmers from whose ranks our future champions would normally be expected to come. They won't come, if ineffectual methods are universally adopted. We would like to ask those coaches who are tempted to take short cuts to examine both sides of the question. We hope the information we have presented will at least prove to them that there is a support system to the arguments of the traditionalists. Our opposition has argued that the only rationale a coach can use to support his methods is that if something works, more of the same will work better. We didn't make up our methods off the top of our heads, as they believe. In fact, it seems to me that the logic of our argument overwhelms theirs with its rationality, the enormous amount of agreement about it within the scientific community, and the success of its practical application.

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<b>Doug Ingram</b>	<b>Mei Han</b>	

# THOUGHT FOR THE DAY

## A Lesson in Training and Developmental Psychology?

“Endure” by Alex Hutchinson

Hutchinson points out something I have observed personally in Kenya, so I know it is accurate. In the Rift Valley at 7-8,000 feet, the Kenyan runners (with WR holders and Olympic Champions among them...) go for daily training runs at very hard aerobic paces. The “younger and up and coming lions” go out with and hang with the established champions as long and as hard as possible and when they can’t hold on any longer, just jog in or even walk. But the point is, they go immediately, as long and as hard as they can, at “top of the world” paces. There is no talk or conception of “pacing” as there would be in most of the western world. It’s “hang with the big dogs” as long as possible.

This reminds me of Saturday morning in Beijing, when the Chinese national diving teams all practice together in one diving pool with the Olympic Champions training right alongside the talented and selected ten year olds. When the Olympic Champion tries a dive never done before and lands flat on his back from the ten meter tower, 300 divers leap to their feet applauding and cheering on the courage of their champion. Now a ten year old steps to the edge of the platform. Imagine what that child is thinking...

I personally imagine this is what makes them the second longest most successful Olympic team on the planet after the USA National Swim Team.

All the Best, JL



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# THE MAGIC OF THINKING BIG

by Mark Schubert

Don Heidary: My name is Don Heidary and it is an honour and privilege to introduce and to know our next speaker. He has had unprecedented success at all levels of swimming creating arguably the greatest club program in the history of sports at Mission Viejo with 44 national titles. He had success at the NCAA level, winning national championships at Texas and USC. A former National Team Director, he placed 38 swimmers on Olympic teams. He is in the ASCA Hall of Fame and he is your new ASCA president. Thank you very much for being here, Mark Schubert.

Mark Schubert: I'm never nervous when I give a talk unless my host staff is sitting in the front row. You guys are killing me. Of course, I did the same thing to them this week, so turnabout is fair play. This is huge and I'm going to tell you a story. I started Mission Viejo in 1972. One of my mentors was Jim Montrella and he was hosting a seminar that Don Schwartz gave and it is called the Pacific Institute. I took that course with his team and it changed my life, not only my coaching life and my swimming life, but my personal life.

I hope that this information helps, although probably many of you know this information. I hope it reminds you of this information and prompts you to use this information. This is not only for your swimmers, this is for you. This information works. I mentioned in the previous talk that I had one swimmer qualified my first year at Mission Viejo for Nationals and then the next year after I took this information. This is true story; I had 17.

Don Swartz literally changed my life with this information and I have had him regularly give courses with this information to my teams as I will this month, 'think big.' Now, what does thinking big mean? Does it mean making the Olympic team when you're 14-years-old, does it mean winning seven gold medals at your second Olympics, does it mean winning eight gold medals at your third Olympics or does it mean changing the face of swimming in the United States for generations? The last goal was Michael Phelps' goal.

I love Gregg Troy and I think he is one of

the smartest coaches and one of the best coaches in the world. But if you think that Caeleb Dressel didn't have those times in mind as a goal without discussing it, that is bullshit, sorry. I completely believe this and most of you are twenty years younger to me, some older than me, have seen an amazing transformation of the world. Prove that if you can dream it and if you can perceive it in your mind, you can make it happen. There are challenges, but there are always solutions.

One of my good friends, Pete Carroll, who was at SC when I was at SC used to say when he did not know what the solution was, 'Okay, we're going to creative nonchalant mode,' in other words- complete confidence that the staff or he would find a solution. Create the solutions. Cuyahoga Falls High School was my first coaching job after college. "Mark, you will be a great coach someday. But, it'll never be in Cuyahoga Falls." So, what's the solution? Get the hell out of Dodge. So, I moved to California for a \$200 a month job. Thank god my wife was willing to work.

It was a risk. But, I was confident that I could become a better coach in California than I could in Ohio. If there's anybody here from Firestone High School today, I know that's different today. I applied for five different jobs. Four of which were high school jobs which is what I wanted, as I wanted to be a high school coach. One of my best friends who is a student assistant at Kentucky with me my senior year and I applied for the same job at Santa Ana High School. He did his master's degree under Doc Counsilman at Indiana and I took the other road and started coaching as a high school coach.

We both wanted the Santa Ana High School job. They were building a brand new pool. We didn't know the difference, Santa Ana sounded like Santa Clara to us. Of course if you're in southern California, you know Santa Ana a bit different than Santa Clara. He got the job. He is now out of coaching and has made a lot more money than anybody sitting in this room, I'm confident. Good for him, he deserved it. I took my second job in Mission Viejo. Two twenty five yard pools and the dream of building a fifty meter pool.

Everybody says, "Well, you need a little bit a luck." Yeah, probably, but let's face it. You can make your own luck. This is a saying by Henry Ford then I'm sure we've all used. 'Whether you think you can or whether you think you can't, you're right.' It's all in how you think. It's in your mind, positivity or negativity. You have to decide whether you're going to tolerate positivity or negativity with your staff and with your team. I can't stand people that think negatively. I can't stand being around people that think negatively.

My team knows it because if they ever say, 'I can't,' I correct them immediately to say, 'I'm really going to try,' or if, 'I'm a terrible backstroker,' it becomes, 'I'm an improving backstroker.' State things positively. Not only is it good for your subconscious, but it's good for everybody around you. When you're talking about a team, if you are negative and the team becomes negative, it's a downward spiral. Setbacks and challenges of the road to success, it was interesting to listen to Greg talk about Caeleb, who was swimming the same time for two years. I don't know about you all, but I had a swimmer come into me last week, who was going to quit the team else after having a fantastic short course season, swimming much faster than they ever had at Great CIF High School Championship.

But, he had a less than stellar long course meet and a lot of his friends improved and he didn't. Not that he got slower, his friends just improved more and he said, "I feel like I'm treading water." You need to teach them that improvement in swimming is not a straight line. Everybody goes through plateaus. My goodness, you can point out the pros and gradually they're going real fast, sometimes it takes three or four years to go faster. But, you have to be patient. You have to do the things that are necessary to get faster.

I always tell my staff, swimming is not rocket science. It comes down to one thing. You have to swim faster in practice this year than you did last year. If you don't, you will swim slower or the same as you did last year. It's not rocket science, work works. My philosophy may be different than other people's philosophy, but we are all working. You have

to be and you have to work harder this year than you did last year. Eddie Reese always says you need to put something in your program that's harder every season. Michael Jordan, how many failures did he have in order to set the scoring record? Missed more shots than he made. Nobody remembers the missed shots, only the made shots.

I want you to know that this is the first PowerPoint presentation I have ever had. I can take absolutely no credit for because our intern, who's eighteen years old, did it all. You are what you think and I love the slide. You could look at this one of two ways. Either you're the reflection in the bottom or you're the kitty cat at the top. I would way prefer to be the kitty cat looking at the reflection about how I see myself.

You are what you think you are. Doesn't matter what other people think, don't listen to what other people think. It's your self-confidence. It's yourself image. It's your determination. Don't listen to the naysayers. You will have a lot of people that they will tell you it can't be done or you're not good enough or you can't do it. Don't listen to it. It doesn't exist as far as you're concerned.

Fear, we all face fear. As a coach, as a swimmer, as a parent, as an employee, as an employer, we face it, do we have it? My decision is not to have it. I preach this to my team. You have to train people not to have fear. Because when they get out of their comfort zone, they will have fear. They will swim great at one meet because they're racing against everybody they know and their teammates. Then, they will go to a higher level meet where they don't know anybody, where people on the psych sheet are faster, and they will have fear and they will have anxiety. They won't swim as well. You have to learn to manage that. Every great swimmer does. Fear comes from fear of failure. Remember we are all going to have some failures, it's part of the process, it's part of the journey, and it's part of the road to success.

I've had swimmers, great swimmers, that had been afraid to set goals. I know what Gregg said he doesn't believe in goals and as I already told you what I thought of that; I don't believe him. Everybody that is successful has goals. I had a swimmer who raced in the Olympics, who won three Olympic gold medals and felt like she was a failure because she didn't do any of her best times. She won. She

has gold medals to prove it, but she is a failure in her mind. I was pretty happy. She had swam unbelievably fast when she was a fourteen and fifteen year old. She was afraid to set goals to go faster because she was afraid she was going to fail.

She didn't set goals. She didn't write them down on a goal card. Didn't talk about splits, just swam. We have all talked about it, that's like shooting an arrow up in the air and seeing where it lands instead of shooting at a target. I couldn't believe when she was disappointed when she was afraid to set goals anyway. Maybe her goal was just to win, but she cried- absolutely cried. Have no fear. Believe that you can succeed. I have a sign on my desk that says one word, 'Believe.' You have to make your team believe; believe in themselves, believe in the work, believe in their coach and believe in their future success.

Just accept the challenges that will come with believing and be positive regardless of the result and just look forward. Many of you are too young to remember a movie called The Gumball Rally. Oh, some of you remember it. It's about cross country race that starts in New York and ends at the Queen Mary in California. Some guys have motorcycles, some guys have souped up cars, some guys have Porsches, and they're all racing each other. They get to choose the route. Some of them get arrested on the way. It's pretty fun movie, but at the beginning there's two Italians driving a Ferrari and they come out of the garage.

The driver looks at the guy next to him, he reaches up the rear view mirror, he breaks it off and he throws it over his shoulder and he said, "What's behind you is not important." I choose to live in the windshield, not the rear view mirror. How many of your swimmers live in fear or continually talk about their failures in life? Just live in the windshield and be excited about what's to come and good things will happen.

Goal setting. I'm so totally a believer of this and I have been since the seventies. You need to write your goals down. I don't care if you write them on a kickboard. If you put them as your screensaver on your phone which a lot of my athletes do and I didn't tell him to do it and I thought it was a brilliant idea because what do you look at it probably more than anything during the day? Your phone, your screen saver. Write your goals down, look at it.

Now in swimming, there is different goals you need to write down. Your season end goal and the splits you need to swim to accomplish that goal. Then in training, your race paces when you do pace work is your goal pace, not your current pace. Sometimes people will say, "Well, my pace is 1:01." Well, if your pace is 1:01, how are you going to go 56? No, your pace is 59. Remind him of that because they don't always relate to that. It's important that you have short term goals, which I call stepping stone goals and long term goals which are dreams, but they are goals. If you believe you can do it, it's more than a dream; it's a goal.

Read and reread every day. Most of you know the educational process and I'm going to guess at this because I don't have the statistics in front of me. But if you hear it, you remember 30%. If you see it or read it, you may remember 70%. If you read it and reread it and reread it, you remember 90%. That's why we have goal cards that they read every day, maybe they have a log book that they keep in the car and they look at it before they go to practice. Maybe they have it on their kickboard and they look at it at practice. Share with the appropriate people.

Now if your goal is to make the Olympic team, you may not want to go around sharing that goal with all your teammates because they might say, "Yeah, right Bobby, you're going to make the Olympic team." Just share with the people who can help you. Share with your coach. If you and your teammate that race together every day in practice and have a similar goal, share with them because you're going to help each other. Share with your parents unless your parents are going to sit in the car on the way home from practice and harass you because you didn't go faster on workout; then, maybe, don't share it with your parents.

This is so important and we do it from the first day of practice. I had a very simple goal setting meeting Monday. Basically, they wrote down- and this wasn't even for the end of the season. I wanted them to write down a meet in November, which is going to be our qualifying meet for Junior Nationals. They wrote what they wanted to swim and then on the back they wrote down their end of the season, which is their December goals. Now we will go into much more complete goal setting process when Don teaches the kids. But, I just wanted him to start thinking about this. I was so pleased with one of the athletes.

Soon as I start talking about this, he is looking at his phone. I mean, does not that piss you off? I got after and he goes, "Coach, you said to write down your goals. I have all my goals on my phone." Oh, shut me up real quick. Michael Phelps, probably the best at goal setting and visualization of any swimmer, writes down his goals. Pins his goals above his bed, so when he wakes up in the morning that's the first thing he sees, and when he goes to sleep at night that's the last thing he sees and he splits.

Do you know that other than the two hundred fly when his goggles filled up, he was within a tenth or two of every split that he planned and within a tenth or two of every final time that he swam? The reason that his goggles filling up with no problem was when he visualized he counted strokes, he knows how many strokes he took. All he did in the race was count his strokes, only problem is final time was a little slower than he wanted to go. So, then, he threw his goggles at the end and his mom later said, "Didn't we teach him when he was twelve never to through his goggles?"

Write down affirmations and this is a step that a lot of people don't do. In my later years, I became very good friends with a gentleman named, Lou Tice, who is the owner of the Pacific Institute and basically researched and developed all of this information. He is somebody that you can Google, he is passed away but he has some great books. They go into a lot more detail than what I'm telling you.

Affirmations. I remember one time, I was at his ranch and we were watching the Alabama football game. He loved Alabama. But, he wasn't watching the football game. He had this thick book with all of his affirmations from the past three years and he was writing in it. What are affirmations? They are things that you write down and think about in the present tense, say you're a 52.00 100 butterflyer and you want to be a 50 flat hundred butterflyer. I actually hate 50 flat, I'd rather be a 49.9, but that's just me. You write down, 'It feels awesome to be a 50 flat hundred flyer.' In the present tense. Not, 'It's going to be awesome,' or, 'I'm looking forward to,' or it would be great if I did, you are. See yourself as you are. It may be what you want to be, but you got to see it as you are because what that does is it imprints your subconscious. And that's what you want to imprint.

Stepping stone goals, these are impor-

tant. I like the end of the season goals, but I like people to know what the stepping stone goals are. You know, I am a senior coach that coaches high school kids. I take thirteen and fourteen year olds and try to make him into really good swimmers before they go to college. Those kids have the age group mentality of- every time they dive in the pool they need to do the best time. You need to have two sets of best times. Your best shaved time, your best rested time, and your best un-rested time. Set your goals in the middle of the season for your best unrest times. Be happy when you can do that.

I love it when somebody comes up to me and says, "Hey, you know that was a second faster than I did three weeks ago." That's the right thinking. That's progress. Get better and better toward the end of the season. As far as the big goal, whether it's to make the Olympic trials or to make the Olympic team, you better know what the steps are along the way. If your goal is to build your own fifty meter pool, you better need to know what the steps are along the way because unless you're going to shell out and do it yourself, you got a lot of steps to do. But what's wrong with that? Why can't you do it? Because you think you can't. Because somebody has told you can't. It's like my dad used to worry about. They were worried about me making a living out of swimming, 'You got to be a lawyer.' "Sorry dad, I don't think so."

Excuses, I almost put the famous saying down there but then I decided to show a little class. Excuses are like (blank), everybody's got one and they will stick. You know like Greg said, "There are reasons, but there sure are a lot of excuses." Don't live in the rear view mirror. Figure out what you need to do better next time. It's easy to ditch your goal, to ditch your dream or play it safe and don't have one because of all the excuses that are out there. First of all, don't listen to the naysayers. Don't listen to anybody that tells you, you can't. Don't listen to yourself if you're telling yourself you can't. You know going back to stepping stone goals for a second. Let's say your goal is to get a full scholarship at USC. \$60,000 a year, 250,000 dollars over four years. That's your goal. Where are the stepping stone goals? Get great grades. Get great test scores. Get the times necessary to do it. What's that going to be? Probably a time that would have time final at the NCAAs to get a scholarship. But, maybe the most important thing- at least, it was

to me- was prove you can compete at the highest level. Whatever your highest level might be, maybe it's Juniors, but prove you can compete. Prove when the heat is on the other people, you come through.

I'd rather have a swimmer that maybe has times that just puts him in the consolation finals than times that puts him in the finals because I can coach him up, but show me you can compete. Take action and what that means is form your path. Figure out the solutions and then do it. You need to have practice goals. It's not just, "Okay, my goal time is this, my split times are this." Have practice goals. Set them with your coach. Sit down and say, "Hey, last year we could go ten one hundred's kick on two minutes holding under 1:30." This year in order to get better you need to hold under one twenty. Ten one hundreds last year, we were able to hold them under minute at 1:15. This year, we need to hold them under a minute at 1:05.

Set those goals for them and then sometimes tell them when you're going to repeat that set, so they can think about it before they walk into the pool. It might be three one thousands best average, last one your best practice time. Know what your best practice times are. How do you do that? Keep a log book. This year, I didn't trust them. Shame on me. So, I passed out a log book to everybody and a pen to make my point. I said, 'I'll probably collect these about once a month and if you don't have it or it's not filled out, it's a five thousand for time. And if it happens the second time, it's a ten thousand for time. But I know you won't do that, hopefully.'

Challenge sets. Set goals for swimmers to do a set that you don't think they can do. Something that is on the fringe of their ability. That's how you build confidence. Best set I've ever seen done, Eric Vendt had a class or something and couldn't come to work out. He came in after workout. We did 1000s, warmed up 2000. 1000 on ten minutes, thousand on nine fifty, thousand on nine forty, thousand on nine thirty, thousand on nine twenty, thousand on nine ten, and went 908. Thousand on nine minutes, and he went 9:04. He failed. What is that? He never thought he would fail. He would try and try again and I had to go into the locker room because I heard him put his hand through the wall in the locker, he was so pissed off that he didn't make it. That's okay, make it next time.

But, there is no doubt in his mind that he had done something that he had never done before and he was better than he thought he was. This is big. 'Want-to' versus 'have-to's', how do you look at life? Do you have to brush your teeth in morning or you want to so your teeth don't fall out? It goes way beyond that though. Do I have to do this kicking set with socks or do I want to do this kicking sets with socks because I know it's going to make my legs stronger and I know it's going to give me a more dynamic kick? Talk to your team about the difference between have to's and want-to's and talk to yourself.

There are a lot of things that I could tell myself I have to that my wife tells me to do. But I tell myself I want to because a happy wife is a happy life. Anybody know that saying? Visualization, this guy does it. I'm sure he still does it. He is too competitive not to continue to do it. It's when before you go to sleep when you're almost in that dream state. You visualize a race, you don't want to visualize every race every night; you get exhausted. Visualize a race just like it's in 4K. Close your eyes, see it in 4K, hear it, smell it, taste it, count your strokes, see the finish. Wouldn't be 8 gold medals without a good finish in the hundred fly. But, that imprints your subconscious. You can do it right when you wake up, doesn't take long to do. You can do it when you're sitting in the line at the DMV.

Whatever it is, if you've got some time and you sit there and you're not doing anything else, close your eyes and visualize your success. Not your 'want-to's,' what you're going to do. And then open your eyes and smile. If it's me, sometimes I smile and I do this. It's a good thing to do with your team too, especially if they're really tired and you want them to lay down and close your eyes. Only thing that makes me angry is some of them fall asleep. Expand your comfort zone. Your comfort zone is how you feel comfortable accomplishing a goal and it's something, as coaches, that we need to progress an athlete in to do it.

Now some people are just comfortable competing. They have no fear, they have no anxiety, and they're just comfortable. Other people, you take them from Sectionals to Juniors, they are great Sectional swimmer and they are tense at Juniors. They are nervous, "Coach, I'm so nervous." "No, you are just anxious." It's easy for us to say, 'Don't be anxious,' but you really need to sit down with them

and talk to them about it. I say, "Look, all you have got to do is perform like you have in the past. Don't think about who's in the lane next to you, swimming is a performance.'

Sure, it's a competitive performance, but it's a performance. Perform like you have practiced, like you've dreamed about. I want to go back just for a minute because I skipped something on visualization, but I think it's a great story. My first Olympic champion was a guy named, Brian Goodell. He took this course from Don, accepted this information, practiced it every day. But what he used to do three times a week was, 'We're just going to do a ten thousand yard practice.' It was one of our easier ones, that's a joke.

He would go a two thousand, not for time. For visualization. He would swim, hearing the crowd in Montreal. Visualizing how many strokes per length he would take, what kind of turns he would have. There's a big sign on the hillside above the pool that says "Mission Viejo." He would turn at that sign like he was looking at the crowd, three times a week. So, then when he comes to the race in Montreal in the 1500, race isn't going too well. Not like he planned. He is in third place, comes to the 800, he is still in third place. I'm in the stands pulling my hair out, "What the hell you are doing, boy?"

He is slower than his pace was when he broke the world record at the Trials. Well, he was scared to death. But, then he took a breath and he saw the awards stand. He started to visual himself with the bronze medal around his neck. He said to himself, "That is so totally unacceptable to me. That's not what I practice, that's not what I've seen in my mind." Then he swam a time the last four hundred that would have broke the world record six weeks earlier in the four hundred freestyle. That's the power of the mind, it's all that is and visualization and training your subconscious.

As far as expanding your comfort zones, one of my favourite sayings is a Navy Seal saying. You have heard it, "Get comfortable being uncomfortable." That's what they do. Challenge your swimmers to swim up as far as meets go. Don't take your whole team to Futures for the rest of your life, because you have a big team and it feels better and they swim better. They get to a point that they better go to Juniors and then they better go to Seniors, if they're going to become as good

as they can be. Swim up, expand your comfort zone.

Junior Olympics, Sectionals, Juniors, Seniors, Olympic Trials, Olympic Games. Where's your comfort zone? How do you see yourself? How come less than 30 percent of the swimmers at the Olympic trials went faster? It's all about comfort zone. They're in an environment that they're not used to. They're marching out. The crowd is 12,000. The pressure is immense, if you make it that way. It's comfort zone.

You need to train and be ready to make sure they go to some big meets. You know I really like swimming kids on the junior level in a pro-meet once or twice a year because they may not make it back. But, they get to see a lot of people that they're going to have to race at Nationals when they get to that level and they start to become more comfortable. They expand their comfort zone. That's a probably up to you, coach. Build confidence. There's one guy living out of the windshield and one guy living out of the rear view mirror.

How do you build confidence? Talk to him a lot. Talk to them a lot. I once had a great coach, Jim Steen, who took a six month sabbatical and came and watched my program at USC and afterwards. I said, "You know Jim, I'd kind of like to take you lunch and have you tell me what you thought was good and what you thought wasn't so good." We went to lunch and he said, "Mark, you run a great workout. You challenge those kids real well, you get them excited on the pool deck, but you don't really sit him down and talk to him very much." Sit them down and talk to them. You can't talk to them when they're in the swimming pool, talk to them.

We had a lot more team meetings. We talked about performances at the NCAAs, how we were going to get there. We talked about winning the NCAAs, we did; that's why Efficacy: The ability to produce a desired or intended result. You develop that ability. You get better at it. If you follow all these steps, you will get better at it and you will dream bigger. Engage in creative self-talk. Create a good self-image. It doesn't really matter what your wife says to you. You will beat yourself down if you don't believe it, if you don't accept it, especially if you don't see yourself is that way. I love my wife. But you have to think, "Man, I'm good. Man, that was a good turn today. Man, I really worked on my finishes. My relay take offs were spot on. My coach loved that. I put

a smile on his face.” That’s the way you need to think and that’s the way you need to teach them to think.

Now, how do you do that? You start off with your positive environment at the pool and don’t allow negativity in any way. That challenges me in one way in one way. The boys like to talk smack. It’s hard to get around that. As long as it is smack and everybody’s laughing, but be careful. You need to watch if the person they’re talking about looks like it stung a little bit or I’ll just pull them out later and say, “Are you okay, did that bother you?” If it did, I’m going to say something to them. I would much rather that they talk positively about each other. It’s important. But, the most important thing is how you talk to yourself.

Don’t tell yourself how stupid you are, how uncoordinated you are, or how fat you are. I visualize myself as a skinny dude. Okay, here is a big one, hang with positive people. I don’t allow my-

self to develop friendships with people that are negative all the time. Make your friends around people that are positive. They think positively. They talk positively. That makes you feel good. That makes themselves feel good. That makes others feel good. That’s a huge one.

You can all think in your mind, ‘Okay, ditch this guy. Stay close with this girl. It’s important.’ There is only one exception. My wife is Dutch and doesn’t believe in spending a cent, doesn’t like it when I do, is very critical of me, and is a very negative person. I still hang around her for 43-years, it’s okay. Okay, this is probably the best way. ‘If you want a better marriage, a better family, a better school, a better community, a better government, a better future, you need to live a better life. If you want to build a better world, start by building a better you.’ That’s a direct quote from Lou Tice. Go online, he’s got tapes, he’s got books, he’s got CD’s. He is the most awesome person I’ve ever met, maybe other than George Haines.

I loved his song because of this phrase, Bruce Springsteen. ‘Mom always told me not to look into the eye of the sun. But mama that’s where the fun is.’ Take a risk. Thanks very much.

I guess we have a couple minutes for questions if you would like to pose any. I guess, yes go ahead.

Speaker 3: When Brian was swimming the 1500, was there any point that Radar Love came in?

Mark Schubert: Actually, that’s a great question. When Brian was swimming the 1500, was there any point that Radar Love came in there? He never told me about the Montreal race, but when he swam those 2000s and visualized, that was the song that he sang in his head, Radar Love. So, it brings a smile to my face every time I hear it. Any other questions? Have a good lunch. ■



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# DISCUSSING RACE PLANS AND PROVIDING POST-RACE FEEDBACK

by Jackson Leonard

Jackson Leonard: I am not going to go over like I did yesterday. We will probably be done a few minutes early even. It is one of those talks, where I think sometimes specific questions from the audience are really more important than what I have to offer anyway when we were talking about what to say after specific races and in certain situations.

The topic that was given to me was "What To Say Before and After Races". I do not think there's any one correct thing you can say before or after races. These are just suggestions, things that have worked for me in the past, some experience, and stories.

I am all about the words you use, why you say things in a certain way, and that's way more important to me than the math and the splits of how the races are supposed to look. So, if you came for the math and specific logistics, I am going to cover very little of that. But, I am happy to discuss it with you afterward, I have some opinions on that stuff.

I am also not a math person. I was an English guy through and through, and to this day in practice I will call out rolling times in practice and new kids will once in a while turn to each other and say, "Coach, is that time subtracted or not?" The rest of the group just cracks up laughing and they say, "He can't do the math that fast." So, math is just not my forte. It is not what I am here for, but we will get into it here.

First, just by a show of hands, how many of you have been asked by a swimmer, "Coach, remember when you told me (yada, yada, yada)? That was so funny, scary, memorable. I've never forgotten it." And you had absolutely no clue what they are talking about? Show hands. Yeah.

What we say is so important as coaches. Even on your worse day, when you come

out and everything else in your day has gone wrong and you step on the pool deck, what you have to say, they are going to remember. So, make sure, because your words do carry weight and just make sure what you do say, you are saying carefully.

Dr. Jen Welter, I talked about her a tiny bit yesterday. She is one of the first female NFL coaches. She worked with the Arizona Cardinals and she talks about how when she was 10-years-old playing Pop Warner Football, some coach told her, "You're too tiny and you're a girl." And that stuck with her forever.

Now, luckily, she spun that in a positive way and was able to use that to her advantage and she grew from that, but that kind of thing sticks with kids at a really young age. I am going to play this on YouTube because for some reason the embedded video is not working.

But before we get there, personal story from when I was working at Ohio State as a Volunteer Assistant. We were at Big Tens in Columbus. We were just staying up the road. One of the nights, going over for the relays and I had a van full of guys. We are driving over and the team captain is telling me this story. This is one of the team captains, he's going to be on the relay and he's telling me a story about how in high school his coach told him he was the biggest disgrace of the team that they had ever seen because he did not run down the other anchor leg at the state meet.

I think, "This is what's on your mind right before Big Tens?" It just kind of shook me to my core; what one coach said and it was probably just a heated moment, but it affected that guy forever.

(Video plays) Oh, it was pretty powerful when I first showed that. It was actually shown to me in a USA swimming Regional clinic, I believe. But, that stuck with

me and we showed it to our athletes to show them the power of positive thought. I think it applies equally to us that that powerful encouragement from his mom, right, changed his mindset for the rest of his life?

Before races: so just quick bullet point things. For me, priority is on the most important information they need for that single race. I am trying to narrow it down and give them just one, maybe two things, for them to think about.

In general, we can remember about 10 bits of information. If you think about your phone number, that is why a phone number is that length, because we can only remember about that many things. I still cannot remember my fiancé's phone number though, and I get in trouble for that all the time. So, some of us are even worse than 10, right?

Think about your kids. They go up. They are really emotional, about to swim a really important race to them and they need the one thing that they're supposed to focus on. If it has not been done in practice regularly, it is not something that suddenly going to be great at a meet.

If you never talk about fingertips pointing to the bottom of the pool in a freestyle catch in their pull pattern and that's the only thing you mentioned to them at a swim meet, they're probably not going to do that very well. Or they're going to have to think so hard about doing that one aspect, other things are going to suffer.

Eddie Hall is one of the deadlifting world record holders and he talks about how the major lifts that he does have actually been practiced and rehearsed hundreds of thousands of times in practice. When he gets to a deadlifting meet, it is actually just putting his body through the motions. His mind has already done the lift; he steps up to the bar and it's

done. We want that same mentality with swimmers.

I try and keep everything simple and positive, especially with Age Groupers. Going in really hyped up or negative or super emotional seems to override them a little too much, so keeping everything positive works really well. Think about: you have to make the decision if you're going to give a group some information or if you're going to do it individually. Sometimes at the beginning of an Age Group meet, that is not our championship meet, if the first event is the 200 freestyle, I'll say, "All right, all the 200 freestylers, come on over." We will discuss general race plans with them. They know all of them get the same information all at the once. That works really well with 11 and 12 girls or 13, 14 girls that are a little bit jealous and kind of cliquey. They would get upset.

I used to have really, really good 11, 12-year-old girls and they would get really upset because they'd think I was favoring one over the other if I gave them individual race information. They would said, "Oh, you really told her to go hard on the third 50 and you told me to go hard on the second 50. So, are you just trying to get her to win?" No, that's individual. As a group, we talk about something they all hear. Everybody gets the same information and they know. Sometimes that's helpful, sometimes not.

Try and keep it five to 10 minutes before the race for those one or two specific individual bits of information. We do not try and talk things 45 minutes before and hope that those Age Groupers are going to remember. But, it's also not as they are sprinting to the blocks like, "Hey, by the way, do not forget to put your fingertips down!"

We will talk about signals. Anybody who is swimming 500 free or a mile the first time, we talked about what this means, and maybe what this means and let them know, "Okay, if I am putting both my arms up it means you are good, but keep pushing. Not 'you are good and settle into a nice easy feel, right?' If I am kicking and it looks like this, 'okay, I add a little bit of kick.' If I am really waving my arms, you better get your butt in gear. If I sit down, that means I've given up and

you are in some serious trouble." But, go over the signals and that's usually good to talk about in practice so that it's not the first time they see it at a swim meet.

Another good one with Age Groupers, sometimes they just repeat it back to me. You give them a simple piece of information, they're nodding their head up and down. "Okay, Sally, what did I just say?" "I do not remember," right? Getting them to talk back and relaying that information is usually pretty good.

I try to avoid the fear thing. Like, 'If you do not do this, you're going to be doing ten 100s after practice because' – then they are just worried about the fear. They are worried about screwing that up and then too many other things fall through the cracks.

I do not know about the rest of the country. In South Florida, we really have to worry about parent interference. We would say to kids, do 'x, y, and z'. We let them go. If they circle back to Mom and Dad, sometimes Mom and Dad have something to say to them, too and it's the complete opposite of what we just said.

Then, they swim. They obviously do the opposite of what we ask. They would come back to us and we hold our hands up like, "What just happened?" "Well, my Mom said that my kick hasn't been very good the very first 50, so I went all out the first 50." 'No!' So, making sure you get on the same page through Newsletters, through parent conferences, talking to parents and explaining, "We are the professional coaches. We are giving them advice before the race. Please let them just enjoy the race. You get to sit and watch and enjoy the race and let us do that." That's important to keep in mind before the race actually happens.

I do like this idea that we got from Coach Bill Sweetenham. "You can over coach. There's too much you can give them, too much you can say and not just at the meet. But, in the week leading up to a major meet." You know, you can give them too much information and have them feel like there's too much pressure on them.

For age groupers, small amount of time between the race prep and the actual race. Like I said, that is not as they are

running up to the block, but try and keep it in a real short window so that's all they have to worry about.

Those older Senior athletes- know the athlete, know how they process information. Do they like to talk about it a day in advance? Do they need a lot of information to feel better? Or are they better with a little bit less?

Personally, I like to discuss the emotional aspect of a race days to several hours in advance of what's about to happen. I had a girl this past year. She is at Futures and hadn't gone a best time in the 50 freestyle and since short course. That was the last time she went a best time and I could see, I knew, that that was weighing on her mind so we talked about the, "What would happen if you do not go best time? How are you going to feel about that? Well, okay, what can we do to make sure you are in the best position to go a best time?" We talked about this days in advance, so that we didn't have to talk about it again in the hours right before she race.

But, then we talked about the technical aspects that we know we have to kick really hard in the first 15 meters. 'This is the time we want to go to get to 15 meters. After the first three cycles, you know your head starts to move.' So, we discussed all those little bits days to one or two sessions before the actual race happened. Then we had one single point immediately before she raced. When she's walking down from the stairs in North Carolina down to the blocks, it was, "Where are you taking your breath?" '35 meters,' "Got it. Go, have fun."

I kept it really simple since we had discussed everything and had taken two weeks to get all the information in, but it wasn't information overload in those five minutes right before the race.

Things to think about while they are actually racing. As an age group coach, I do not take my stopwatch to many meets actually. I like to watch. I like to give back technique feedback. If I really need certain splits, I'll take those splits and give them to swimmers. If they are learning what their splits mean and how to manage themselves accordingly, well,

you take those splits. But, mostly, we use just the stroke info that we are watching.

Everybody needs to get something, though. It is really heartbreaking for kids when you have four or five kids and they come back over and one kid is standing there and all the coaches are holding up their hands looking each other like, "Oh, you had Sally. I didn't even see her." Make sure that somebody is watching everybody and everybody gets something along those lines.

I have a little list in the back of my head of blanket information to give kids if I do miss them, things that I know everyone needs to improve on. So, if I didn't see a swim, I go, "Oh, yeah, well, I think your last wall, your streamline came apart a little bit and you really could've squeezed the elbows in a little tighter. And you know about finishes, right? We got to go a little harder." They are like, "Oh, yeah, that make sense." Having a good list of always true things is helpful.

I hope he's not in the room. I learned from Coach Troy so I used his picture for this specifically because this is one of the main messages I learned from him and working around him. It is our job to connect the experience of the race with the emotions that they feel. It is really easy as coaches, and since we're so invested in these kids, it's really easy as coaches to watch someone who have a bad race and feel bad for them and allow them to disappear and not tell them the harsh reality.

"Sally, the harsh reality was you did not train this summer." "Sally the harsh reality is you have never gone a fly set all the way through without breaking stroke." There's a reason you didn't go best time in butterfly, right? The five to 15 minutes immediately after race are critical, get to them. It is emotional. You control the narrative.

I had a lot of kids who disappeared in the warm down pool. They get with their buddies that are also not swimming well. And, "Man, coach really screwed this up with his taper and the rest. We didn't do any breaststroke. That's why I am not going to breaststroke best times." Make sure you are connecting and you are running the story for them so they know why they

did not go the best time or why they did go the best time.

Same thing is true for a best time by a lot. "Oh, I did it! I ate 16 jellybeans right before my race and I stayed up all night playing video games and I still went a best time, so coach is wrong!" "No. You went a best time because you finally didn't breathe the last five yards into wall, all right?" Make sure you control and manage that narrative.

Your opportunity connects that pain or joy to their physical experience. I can't stand the, "Oh, I just got to stop by the team tent really quick. I just have got to grab my other goggles. I have got to change my suit. I have got to do all this other stuff before I come talk to you, Coach." That, to me, is all code for 'I want to talk to somebody else to validate my feelings about my swim.' Talk to the coach immediately after they race, in my opinion.

The other thing that Coach Troy was extremely good about and I do not know how many coaches that work around him really grasp it, it is he is known for – let's say it politically correct, for being very emotional about his feelings after a race – he'll let somebody know if they didn't swim well. But, he does it on purpose. He always thinks about it.

Then, even after he has yelled or raised his voice or gotten upset, and that swimmer is walking away, he will grab another coach and say, "Go talk to them in five minutes and explain the other side of this." There is always a good cop, bad cop mentality. Some people see the yelling and screaming and they go, "Oh, that's real harsh." What they do not see is that there is a specific reason why other coaches are sent down to help out. That is always a good thing if you do have to deliver a harsh message after a particularly poor swim.

Exceptions: I know a lot of coaches that are really hard about warm down. They say immediately after the race, "You have 15 minutes of nonstop movement. You cannot stop for any reason. Do not come talk to me until you have done that warm done." Okay, I understand that. I understand the physiology behind that, why coaches want that,

but also know your athlete.

I have plenty of athletes who use a warm down to hide from me. They have a bad swim, they do not actually warm down for those 15 minutes. They sit in a corner and bob up and down or talk to their friends that are also swimming poorly. I have one or two girls in my group right now who will come talk to me if they have a great swim; but, if they have a poor swim, they disappear. I do not see them until after their next race. Then, they hope that I forgotten about that poor race before they talk to me about the next one.

If they are energy vampires, do they suck the life out of your tent? I do not really want that kid going back to the tent to talk to everybody else before they then go warm down and then come back over to me because then they have affected five other people.

Then, the last one, if they are having a bad meet and they are on their fifth poor swim, I want to talk to them. I want to talk to them about that idea of big wave surfing that we talked about yesterday. We are going to talk about worrying about where they are now, what they can do in the next 10 minutes to improve. I do not want to let them get away for 15 minutes and disappear away from me.

I understand where some people come from when they say, "Well, you know, you have to warm down right away. It's the most important--." Sometimes that personal touch from a coach is what's actually more important before they start to warm down. Just things to think about, I do not think one is better or worse than the other. I actually think it depends on what type of season you are in, who you are working with.

Post-race discussion, you can do questioning. You can do Socratic Method or you can do this real dictated method where you're telling them what went wrong and you're telling them all these other things.

If you're dictating to them, you are the authority. There is really not a lot of thought required on their part. I think we do this a lot, I do it especially with our high school team. We have Varsity 2 swimmers that play water polo, where they just swim for the high school season.

They come over. They are just there to have fun. They swim a race. I want to tell them one thing they did right, one thing they did wrong, one thing they can improve, and then they leave me. It is a little less thought required for that and probably a little bit better for the younger guys that aren't thinking a whole lot.

But, with other swimmers that you are really trying to develop – I really like questioning them. Questions designed with 'yes' answers first rather than 'no's.' Trying to get them to think, "What do you think of your race? What do you think you did really well?" You stand there and let them actually pause, let them actually think about it, and tell you something true.

"What do you think of these splits?" If you're taking splits and you show them and they have a really heavy negative split, "Is that a good thing? Why do think that's a good thing, Sally? Where could you have improved? What could have been better?" Make them think about what their weaknesses are so they can improve that for the next race rather than just telling them what their weakness was.

You will see that a lot where somebody is working on their underwater kicks and practice. They usually take one when they are working in practice. They have been taking three pretty regularly. They get to the meet and they are taking two underwater kicks, right? But, the person next to them, who is also on your team takes five or six and they look pretty bad compared to that kid taking five or six.

I have been caught in the situation where I will yell at a kid, "I can't believe you only took two underwater kicks off every wall." In reality, that was one better than what they normally do. It shows an improvement in practice and then they leave me thinking, "Well, I've been working in practice and I did better than usual, but you yelled."

Instead, by asking that question of, "What do you think improved?" Sometimes they surprise you with an answer and they explain, "Well, I took two kicks when I usually take one so I thought that was pretty good."

And 'yes' questions, I prefer to start, at least. This comes from How to Win

Friends and Influence People. But this idea of, "You really tried to stick with no breath break after the start of your race, didn't you?" That question where they go, "Yeah, I really did." They are a little more open to hearing more feedback, as opposed to something where you say, "Did you do no breath breakouts like I specifically asked you to do?" They know they didn't – 'no.' There's nothing going on there. They do not want to receive more feedback after that. So, trying to start with yes questions usually helps out.

What to say after a good or great race. In my mind, I break it into three different things: physical things you can say, mentality things you can say, or emotional things. From the physical side, I get specific as I can. I really like to not just say, "Hey, it was a nice race," because they want to know what about it was good. I'll say things like, "Your entry was small. You were quick off the block. Your stroke count was something we were working on," or we will highlight some kind of split improvement that was better than the last meet.

Mentality, I like to address that because I told you yesterday, I had been working on this mental side of the swimmers and their mental training. If I see someone is really keyed in, really focused behind the blocks, I want them to know that that hasn't gone unnoticed. I can see that they were focused. They were not goofing off behind the blocks playing with friends, not watching the meet. They were zeroed in.

Emotional stuff: in the same way we tell swimmers to not get too upset if they do not go a best time, we want them also to not get too high on the emotional rollercoaster if they do go a best time. I try to do the same for myself, where if it is a poor swim I am not bottoming out. If it's a new best time or a Junior National cut, I am not running around the pool decks hollering and screaming, I am trying to show them that that was expected if we went a best time. That's why we have been working so hard. 'Here's what we can improve.' So, trying not get too high or too low based on swims.

This one took me a while to learn as a coach and I hope anybody who is new to the sport or just getting started again can really hear this part. I cannot stand it

being at a swim meet and hearing a coach next to me tell somebody else, "Wow that was the perfect swim." Why is a swimmer going to come to another meet after that? If they just swam the perfect swim, there's no room to improve, there's no growth, right? We want that growth mindset that we can always get better. We can always improve. Saying, "You were incredible," I learned that one from my dad. What does the word 'incredible' actually mean, right? It was incredible. Kids can key into that and understand that.

'You couldn't have done any better.' Really? I also do not like the generic, "Okay, great swim. All right, nice. That was a good warm up for the 50 fly coming up." All that does is instill this mentality in swimmers that they can pick and choose which races are more important to them and use certain races to warm up for other ones. You do one thing the way you do everything, so you want to treat each race individually as if it's the most important thing you are doing in that moment.

For us, just being honest and being authentic. If you lie to a kid to say, "Yeah, that was really a great swim," they know when they didn't swim well. They'd rather hear the truth and hear, "Okay, it was an okay time." I am known for saying, "Yeah, you went a best time, but it wasn't your best effort." They know what that means, too. Where they, "Oh, I snuck by. I went a best time, but I know I took a breath inside the flags. I know it could have been better."

Ordering your feedback to maximize how much they actually receive. I didn't know about this one either until a couple of years ago and then I really caught myself after I started saying this after I heard this. The power of but. Everything you say before the word but goes unheard. "It was an amazing swim, but you didn't do this, you didn't do this, you didn't do this, you didn't do this." All they heard were those negative things that they didn't do. They didn't hear the part where you said it was an amazing swim.

You want to try and order that feedback and eliminate the 'but' or add in 'maybe' or 'we could have'. So, ordering feedback. I like to start with negative

things. I like to get that out of the way first. I like to talk about what was really not good about a race. I will throw in some neutral things, maybe just observations of what was happening. 'I notice you were circle swimming, we can improve that.' That's not really a negative thing, but there are certain things that are sort of neutral.

Then, I like to end on positive. I love ending on hope and ending team meetings on hope, parent meetings on hope, individual meetings on hope, because that's what we all thrive on. So, when they walk away from you, even if it was a terrible swim, they should feel like, "Okay, it's all right. I can get the next one." They should not walk away dejected, head down, feeling terrible, and not feeling like they even want to race the next one.

Negative stuff: focusing on what was not good, what needs immediate improvement, too. With negative things, it is always good to find something that can improve at the meet. I caught myself a few years ago, all my negative feedback at meets was, "Well, we got to go back to training. We got to go back to practice and this is what you have to do in practice."

Then, I realized that by saying that, if it was the first or second swim of a meet, they knew that that could not change between the first swim and the last one. So, there was no hope; there was no chance that they were going to get better even by the end of the meet. And there wasn't the full, honest effort for those last few races. I really like throwing in a few, "Well, even here, we can focus on a faster turn by doing this." I like asking questions in that neutral area, as well, and positive stuff we covered.

Facts on potentially negative feedback: in the same realm of sending another coach after someone you just yelled at to get them to feel better, I like bringing in an additional set of adult ears to hear if I have to say something really harsh and negative. It is very rare that everything I deliver to a swimmer is going to be harsh and negative after a race.

But, if I really have to tell them that they were not coming to practice, they have

not been giving an honest effort, they are a distraction in practice, or anything like that, I go, "Hey, Coach Chris, you mind stepping up over here so that you can hear this?" That way, when I say all of that and they walk away angry and they go straight to their Mom or they go straight to their buddies and say, "Coach Jackson said this and that." You have a back up, you have someone who heard you say something and they are there to back you up later on when it comes back through the grapevine that, "Oh, Coach Jackson said that they are the worst swimmer they ever had." You had someone there to back you up.

This is about as race specific as I am going to get today. I like breaking down races into specific parts: understanding their splits, having consistent standards for how we swim races. Our team, we talk about how from the first to the second 50 in a 200 you want to be a second or second and a half difference. The first 50 of a 100, we want them to take it out within the one second of their best 50 time. If they are a 25 flat 50 freestyler, in their 100 they are trying to take it out in 26.0 or better. That's pretty standard for everybody. Everybody on our team knows that.

Even if we talk about, "Oh, we are going to try and swim the 200 a little differently this time. We are going to put a little more emphasis with your legs on the second 50 and little bit faster tempo on the third 50. Focusing on the last three turns being especially tight," they know the general rule of the second to second and a half split difference between those 50s. Those are just concepts we teach to the kids early on so that they have a pretty consistent standard.

Big concepts I go by: I heard yesterday someone said that they do not use stroke counts very much. We are the opposite, that's all I am working on right now. Stroke counts for 25s and 50s, they know what their goal should be in practice when they are moving fast in practice. Then, we talked about it at the meet.

I think pairing stroke counts with splits is really helpful. If you show someone, "Okay, you took eight strokes, 10 strokes, 10 strokes, 13 strokes by 50s but your splits stayed exactly the same the en-

tirely through, well, you do not look very efficient on the last 50 if you took five extra strokes." So, pairing stroke count and splits is usually pretty helpful.

I like tempo. I taught tempo the other day in Level 2 school. It is really useful skill and you can go back to practice and work on stroke tempos with tempo trainers, That idea of changing your stroke rate, a lot of kids really like that. Then, time required for turns also gives you a different metric to use rather than the same splits all the time like, "Okay, here are your four splits."

Sometimes I will take a whole meet and just time their turns. "It's okay. In 100 freestyle you had a 1.0 second to first turn, 1.2 on the second turn, 1.5 on this third turn and how does that look? What is that compared to how we've been practicing?" "Well, we've been practicing just one second turns and you are really slow on the last wall, so that's a point of emphasis that can improve even within the meet." So, just having some different concepts to go work by other than just a usual, "Here are your four splits,' you usually get after the race.

Other personal quirks for myself. I like long-term comments, too. I like to say we are going to continue to work on this in practice. I just like to say, "We want to work on this in practice, not you need to work on it." You is sort of this accusatory, 'you haven't been doing it.' I like to say we want to continue to work on this. That means it's a partnership, it's the two of us working on something. I know you have been working on it, but we are going to continue to develop it because I want to suggest a continued effort.

A lot of kids respond really quick if you say, "You need to work on this." They'll throw their hands and they will be like, "I have been. Haven't you see me do it in a practice, Coach?" Then, improvement today, especially when they are going through a rough patch or a plateau. You give them something really specific for that meet that they can think about and improve something they can work on even in warm down.

If you notice their elbow is dropping, giving one or two drills that they can take immediately to warm down pool and

start to work on there. It is just a really common thing I hear at meets, especially from coaches, you know, "Oh, next meet, you need to be doing this." Let's work on it now! Let's start right now. Let's work on little things that we can do.

Then, asking kids to keep a 'meet notes' logbook. I like to keep one for myself, as well. So, if I tell them certain things for this race, they write it down in the car that they always drive in to get to meets. The next meet, on the way in, they should be looking over their notes and making sure they are not making those same mistakes.

I keep the same logbook. High school season is the best because we have a meet every week. I say, "Johnny, five weeks in a row I've told you the exact same thing after your race. Either I am not saying it well enough or you're not listening well enough." So, having that proof right there in front of you can be helpful for them.

Some suggested reading to help out, I do not remember if they were in yesterday's talk, but Mindset, talking about growth mindset versus fixed mindset which is really good for youngsters. How to Win Friends and Influence People is actually pretty old, but every concept still applies. The examples are really outdated, so you might have to do some research about the examples, but the actual concepts are really good. And this one was in yesterday's talk, but it's pretty good. Teach Like Your Hair is On Fire.

Last one, before you try what you just heard and you put it into use, please go to your next meet and just listen for the first hour. Listen to the coaches around you on other teams. If you notice any of those teams, if you hear someone saying, "Yeah, perfect race," and realize how prevalent it actually is, then start to apply some of these things we talked today.

Thoughts, questions, comments? I actually ended right where I wanted to. I am available now for specific split stuff if you want to talk about that, but after is also good.

Male Speaker 2: How young do you start talking about tempo?

Presenter: I will talk about the general idea of tempo to someone as young as eight, because I can show them a tempo trainer and I can explain, "Okay, are you ready? We are going to watch so and so, swim." I want you to listen or watch my watch here every time his right hand goes in, beep, beep, beep, and I showed him, okay, that's 1.2. Now, let's watch this one now. Let's pick someone who is much slower and show them how much slower it gets. I can explain that number to them, they understand that. Then I can give them a tempo trainer set to something and say, "Okay, hold this tempo." They get that idea.

So, the general idea can go as young as eight and it can be helpful to get someone who is swimming in slow motion or someone who is just hacking away at the water. But, we will get really specific with our older guys of, "Here's what I want you to hold for the first 50 in a 200 backstroke."

Male Speaker 2: At what age do you typically start the being a little more critical about their race?

Male Speaker 1: Day one.

Male Speaker 2: Day one.

Male Speaker 1: Day one.

Male Speaker 2: Six-years-old?

Male Speaker 1: How I say it will change from groups to groups. If our bronze group kids come over, 8-year-olds, and

they were breathing every single stroke in the 50 freestyle, I'll make a joke about it and laugh. Then I'll say, "All right, now, the guys in the Silver group, they try and only take five breathes of 25." And they go, "Okay." So, they still get the feedback and I am critical to start because they need to know that it's not 'just do whatever you want.' There is a reason why they're on a competitive swim team. Yeah?

Male Speaker 2: How specific are you with split times with Age Groupers?

Male Speaker 1: I actually had this last week, right before I came out here. We got two new coaches and one of them was doing a pseudo quality set with our Gold group kids. They are 9 to 12, just doing really fast 50s between some longer swims. As they would come in, he was giving them splits and yelling out 36.8, 37.1, 38.2, and going on and on. I realized, not one of those kids even heard the 38, never mind the 0.2.

But he's an accomplished Division 2 swimmer; really good. I kind of whispered in his ear, 'Maybe just the 38.' I get them used to the idea of a round number first, whether the round number is any good. Then we try and do that same thing at a meet, where if the kids aren't going to comprehend the difference between 38.2 and 38.9. I am just going to talk about, 'These numbers are pretty much the same, do they go way up? Do they go way down? Would it be really good if they went up and then went way down or should they all just stay pretty fast?' So younger, pretty vague and getting the general ideas. Then as they get older, getting more specific with what we want.

Thank you! ■

51<sup>st</sup> ASCA WORLD CLINIC 2019  
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## THOUGHT FOR THE DAY

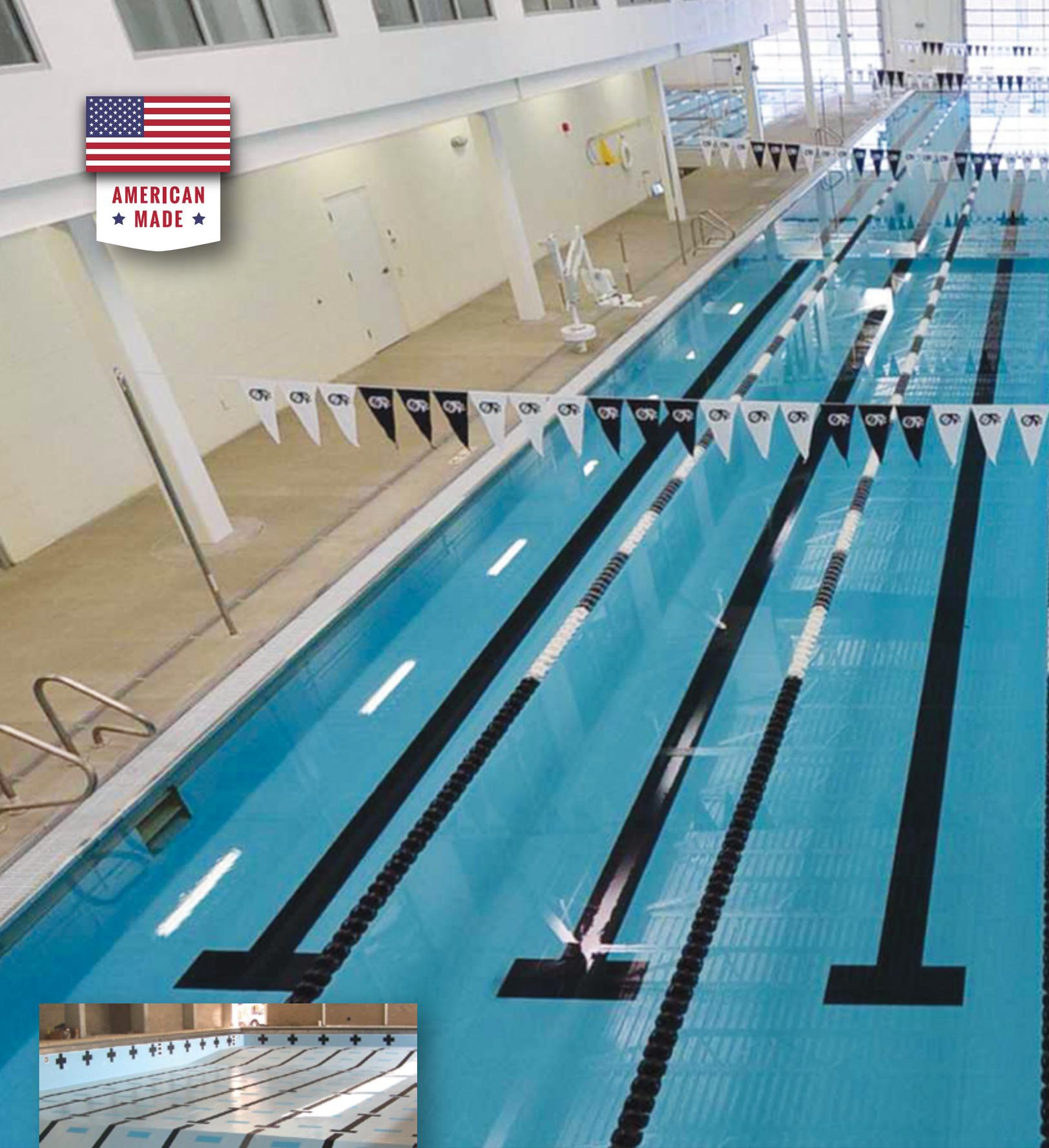
“Vision must be sold every day, every word, every thought, every lap, every one, every thing, every where. There must be an overriding anchor to your philosophy and it must link life and happiness to sports and performance. It must be an organizational mandate (a “we” concept) a blanket wrapped around your team. The team must feel its presence. It must be imbedded in all aspects.”

Coach Don Heidary, Orinda Aquatics  
President of the American Swimming Coaches Association.





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Helen Keller

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# What is important to the ASCA Board?

by George Block



A few years (decades?) ago, Mark Schubert was frustrated. Out of that frustration came a phrase that could be used to guide every non-profit. “Damn it, John, I didn’t leave my team and fly across the country to hear about how you manage the ASCA. I came here to talk about how we make swimming better.” Every head at the board table nodded silently and John lit up with a smile, because that was exactly where he wanted to focus, as well.

Today, the ASCA Board still approves previous minutes, reviews the budget and goes over World Clinic plans, but it does those things quickly. The real meat of an ASCA Board meeting is, How do we make swimming better?

This always starts with American Swimming, with a special focus on USA Swimming, because nearly all of our members (even our high school and college coaches) are club coaches. The board meetings nearly always include collegiate swimming, high school swimming and summer-league, but the topics don’t stop there.

Since the Congressional Charter for USA Swimming is really to organize the US National Teams for the World Championships and Olympic Games, international swimming is always near the top of our agenda. As the late Coach Jim Wood (former USA Swimming President and ASCA Board member) would tell us repeatedly, “What is good for world swimming is good for American Swimming. If we focus on doing what is right internationally, American Swimming will flourish.”

Additionally, about 50% of the ASCA membership is international. Coaches from all over the world want the education and, especially, the certification that the ASCA offers, but they also remind us that the ASCA is the only independent coaches’ association in the world. They bring their issues from around the world to the ASCA because they know that by informing the ASCA, eventually their issues will be brought to light. We gain tremendous “intelligence” from our international members.

What is important to the ASCA Board today? Domestically,

Business Models are important. At every level of American Swimming today our Business Models are failing. The “Centers of Excellence” were only able to survive with massive infusions of USOC and USA Swimming dollars. Coaches had the best swimmers in the world in one pool, but they were not able to monetize it and make the Centers sustainable.

At the collegiate level, we are still seeing scholarship programs being dropped every year. USA Swimming funded – and still funds - a collaborative grant project with the CSCAA and the ASCA to study the issue and develop strategies to Preserve, Protect and Expand Scholarship Swimming. A strong, strategic response was developed, which was then watered down and has seemed to have disappeared with the formation of the new USA Swimming Board. As a coach, can you imagine American Swimming without scholarship, collegiate swimming?

Every year, USA Swimming gives grants to the top producing clubs in America. Some of those are quite innovative, but the vast majority are things that we would all expect to be a part of every club’s annual budget. When the most productive teams in America can’t afford basic supplies, we have a major business model problem.

The new National Team oversight structure is also a key topic. USA Swimming did away with the very successful National Team Director position, because they couldn’t find anyone willing to take the position. Instead of dealing with the reason why, they simply did away with the position and reorganized the office. Since then, the ASCA Board has seen both actions and lack of actions that would not have occurred with a strong NTD.

Even the way the new USA Swimming Board is being managed is a topic of concern. I used to be able to find the current USA Swimming Board of Directors Roster on the website, complete with cell phone numbers and personal email addresses. That is no longer the case. It seems that outside information is being kept from the board, with all information coming from staff. What good are independent directors without independent information?

There is also a concern about the structure of National Committees. We knew that they would now be appointed by staff, but should they also be Chaired by staff? When staff appoints themselves Chair of critical committees and then appoints all the membership, are they really getting the outside advice they need?

Safe Sport is an issue. The ASCA was the first swimming organization to have a Code of Ethics – more than a decade before USA Swimming. Safe Sport is critical. To be effective,

it must be simple, clear and logical. One or two rules would seem to solve everything. We could start with No Privacy and Professional Communication. Instead, we are getting a typhoon of micromanagement that doesn’t seem to relate to any cases we have heard of in the past. We seem to have gone from taking a serious issue seriously to creating solutions in search of a problem.

The international issues have simultaneously not changed at all, while changing dramatically. Doping is still the scourge of elite sport and no organization is taking it seriously. As long as doping doesn’t affect the checkbooks of the IOC, FINA or the USOC, anti-doping will be lip service and swimmers in authoritarian countries, especially young girls, will be forced into systemic doping. Doping is an issue where even the offenders are victims.

The corruptocracy that is FINA cascades down to the National Federations, especially in the third world nations, but even the first world isn’t immune. In order to maintain “good relations” with a corrupt body, first world nations must turn a blind eye to blatant corruption and international bullying. John F. Kennedy quoted Edmund Burke in saying, “The only thing necessary for the triumph of evil is for good men to do nothing.” That is the state of world sport today.

The sudden change in world sport is the introduction of the ISL. The ASCA has been working with the ISL to develop and produce both the teams and the events for their first season. Success is anything but guaranteed, but if it can succeed, it could be a game-changer. If the ISL can succeed, then FINA will have a competitor. If it can work in swimming, it could work in other sports.

If it can work in other sports, the IOC could find itself with a competitor. That could be the best possible scenario. If FINA had a competitor, it would have to behave much better. As long as there is a FINA, the ISL will continue to be a model of athlete support and inclusiveness. The same would apply to the IOC. If it had a legitimate competitor, it would have to change the way it deals with nations, cities and especially athletes.

From the base of swimming, where the ASCA has the best model (SwimAmerica) for coaches to add a swim school to their business and competitive models, through summerleague, where the ASCA has a comprehensive training program for summer-league coaches, to advocacy at the highest levels of sport, the ASCA is involved helping coaches improve themselves and their sport.

That is what is important to the ASCA Board. ■

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**\*Important information to know.**



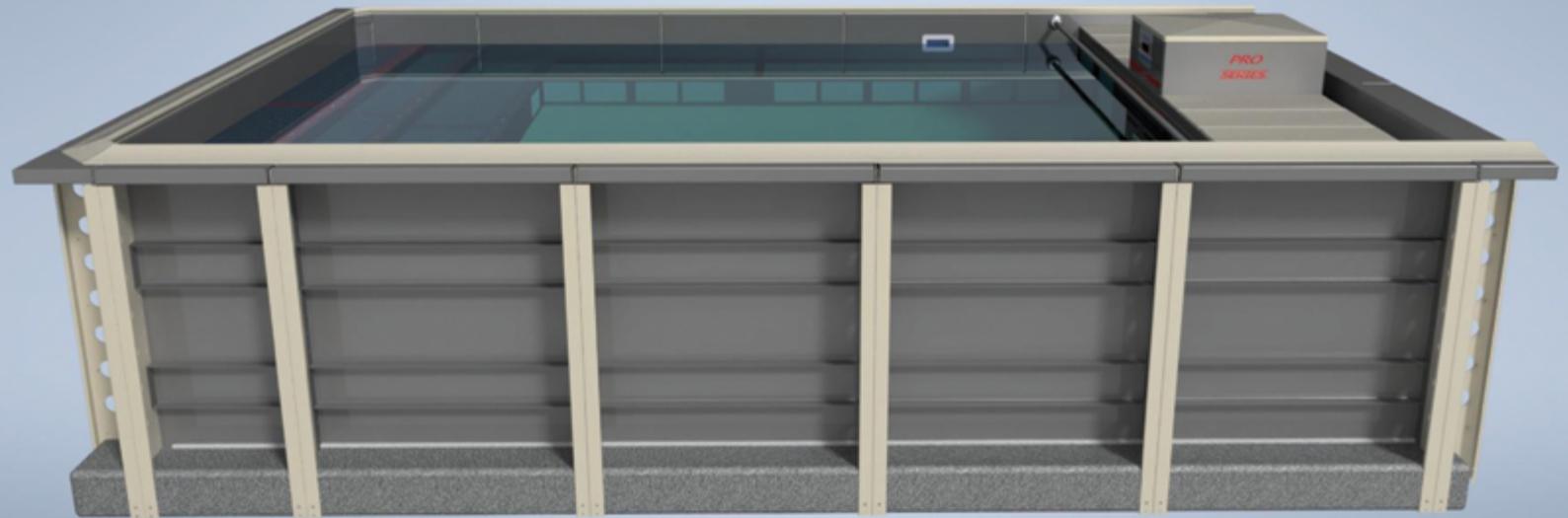
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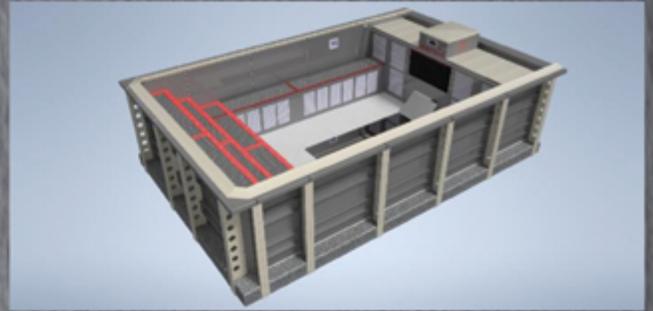
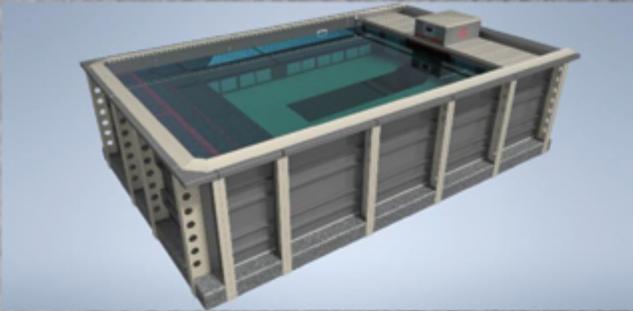
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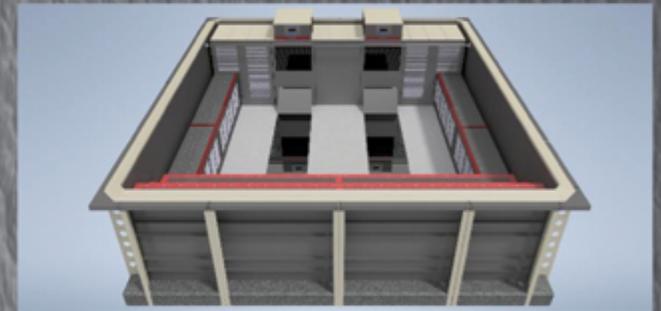
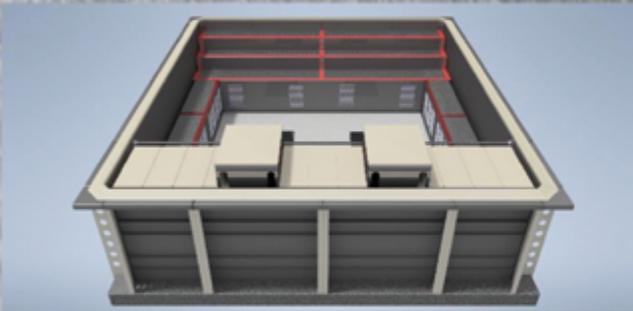
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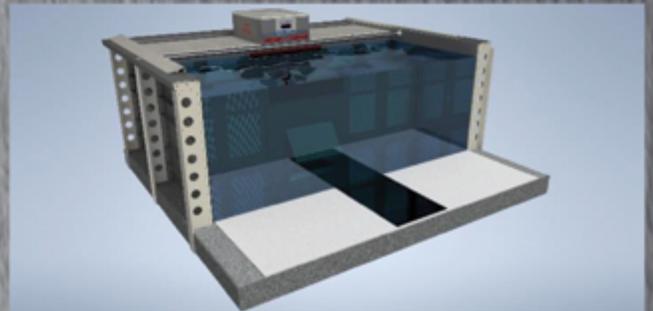
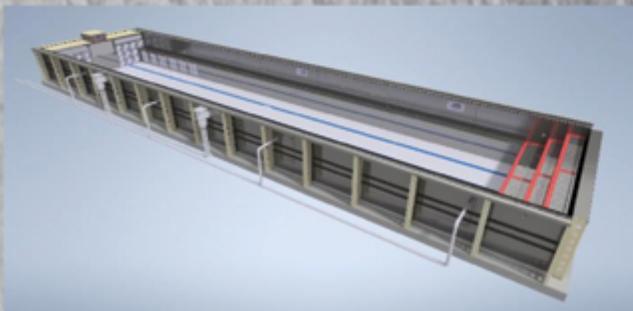
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# STANFORD DISTANCE SWIMMING

by Jeff Kostoff

Introduction: I get the distinct honor in introducing one of the people that you look up to when you're a kid and a swimmer. I was looking up to Jeff Kostoff as a swimmer holding the national high school record and then, going on to do great things at Stanford. But, then also going on to coach at Indiana University for three seasons before he is able to come back to his alma mater.

To give you some perspective on swimming, they say that college swimming is largely turning into a sprint sport with the role of relays and so on and so forth. But, when you consider what the Stanford men distance crew did this past year at the NCAA championships, they effectively scored 88% of their individual points at the NCAA championships. That is more than diving and more than sprinting, and almost as much as the relays put together.

It sure shows that the impact of distance swimming still is meaningful and it can make a very meaningful impact for your team willing to get to that conference and to that NCAA level. But you didn't come here to hear me speak, you came here to hear Coach Kostoff speak, so I want to turn it over to him.

Jeff Kostoff: Thanks. Thanks.

[APPLAUSE]

Jeff Kostoff: Hello, everybody. All right. Great. Yes, I am here to talk about distance swimming and a little bit more because I actually coach the distance swimmers and the middle-distance swimmers. A lot of the guys in my group are pretty much 200s and up. Abe Devine coaches with me and he's a 400 IMer and he's a distance swimmer.

The main theme that I have here today on the title here is a differentiation. The reason why I lead with that is it is interesting what I was thrown into when I was at Stanford for the first year. I had a group of swimmers, distance swimmers, and they swam the same events for the most part. But as far as training, capabilities, outlooks, and approach, they really couldn't be more different.

I really had to work to figure out ways to address the different ways in which they

trained. This is a coaching philosophy for me is that I really think that you have to approach your swimmers and get to know them as well as you can and be able to give them the type of work that is going to help them get better. Give them the type of training that's going to help them get better and that they are going to believe in.

Right off the bat, if you're familiar with some of the personnel that I have, I have on one end, True Sweetser and he was on the World Championship team last year in the 1,500. He came up a little short this summer. He was still pretty close to his best times, but he is your consummate distance swimmer with the very typical frame in that he wants to do more always. If five is good, then 20 is better. That's True's mentality.

And then at the other end of the spectrum, I have Grant Shoults. The reference point of what I really figured out with Grant and getting to know him and talking to him is that when Grant was a freshman in high school, around the time that he was a freshman in high school, he was deciding between whether he was going to swim or whether he was going to be a pitcher. He was an excellent baseball player and a top-level pitcher for his age and on all those traveling teams that go to the Little League World Series and things like that. That's his frame of reference.

His frame of reference is so much more precise and so much more exact. With a swimmer like Grant, it would be easy. If we had him do your traditional distance work, you would break him. It wouldn't work for him. So, he has a very different approach. Then, I have others in between. And that's where we will talk about as we go along here. When it comes to a coaching philosophy, I really believe that as a coach, my job is to help the swimmer get better. I know that sounds obvious, but I say that my coaching philosophy is not 'coach centric' it's 'swimmer centric.'

I do not have a program where 'you are going to do my program and this is what it is going to spit out.' I am going to take what I know, what I've experienced as a swimmer and what I've experienced as a coach and I am going to try to adapt

things as accurately as I can to someone's particular set of skills, mindset, and what they are capable of and to help them work on becoming better. But, from my perspective, the onus is always on the swimmer.

I am there to motivate, I am there to push, I am there to think things through, I am there to talk about things with them to help them get to those points, but ultimately, it's up to them to communicate with me and help me with them figure out what's going to work. That is the way I approach things and I try to be very flexible in that way. I think, for me, that comes from the type of swimmer that I was. I will spend a few minutes talking about that. I was pretty unconventional when it came to swimming.

I did a lot of things that you would not do. For example, I swam for a team that closed down and as a result I had to go to the next team over, which was Industry Hills at the time. This was around the time that I was about to be a freshman in high school or maybe it was after my freshman year, I can't remember exactly. Either way, it was a much further drive. At that time when I was starting with that team, they had morning practices and they had afternoon practices and it was 35 minutes each way for me to drive. With the type of work that I was trying to do in school, that just wasn't going to work.

We came up with a different program and for most of my high school career, during the school year, I did single three-hour practices instead. Then, the other thing also that I did that was different was a lot of kids from Southern California played water polo and I ran cross-country. I was used to very hard work, but I would also say that I was much more about intensity than I was necessarily about distance. In the mid '80s, in my time, people were going 100,000 meters a week.

That was a pretty normal thing to do for people to train 100,000 meters a week. During school, I was never going that far. The most that I would be going would be maybe 75,000, but just not as much. What I thought would be better was that if I swim less, faster. We still did some pretty good long distance. We can talk about sets and stuff like that later, but

I developed a system where I would swim more at a higher level and then leave it at that.

That went with me the whole time. When I was at Stanford, I could remember lots of times where I would want to get in and because of other stuff that had going on, it was like, 'Okay, we got two hours for practice. Let's get our 10,000 in two hours.' I had lots of practices at Stanford where I got 10,000 yards in two hours. But, that's the way I wanted to do it. Let's get in, get it done, and get out of here because I got stuff to do.

So, that is my perspective. Then looking at the types of swimmers that I like to work with and I think that are easiest to work with. Again, my differentiation, I like to differentiate as much as I can with the training methods that I come up with in sets and programs. Then, I am always looking for versatile and flexible kids. Flexible mentally because you have to really be able to roll with things, especially as the years go on. Swimming for four years in college at a very high level and achieving at a high level and training at that level is all very difficult.

If you do not have a versatility, it is going to be really hard to make it through those four years and necessarily feel good about it. Whereas if you are a nice, versatile swimmer that can do lots of things, then it's going to be a lot easier for you to get through those four years. For example, if you are swimming the same two events in all dual meets and championship meets and those are your two main events through four years, you are really going to be sick of those events by the time you are done. So hopefully you have got a progression that you can go through in those years.

I am assuming that most people here are from club teams. The reason why I talk about this is I know that a lot of things I am going to talk about today, you are going to have to adapt because we are spoiled at the college level. We get to do things like, for starters, we get to pick our swimmers. For the most part, through recruiting, we can decide which swimmers we want to bring on the team and which swimmers we won't. When you are in club, you have to service a much larger population.

Then, one of the other things that happens with college, is you typically can get a lot more focused training groups and I think that is where a lot of your intensity

can come from because you are really getting into groups where you get honed in on some very specific type of training and that has to do with a handful of kids that are doing the same things. Then, you have a lot more space in the pool. We are really spoiled. Our next year at Stanford, we are going to have the largest team that we had since I have been there and I think our roster is up to 27.

We have 27 guys and we are set up short course. In the afternoons, we have 11 lanes to put 27 guys in and I know I am pretty spoiled in that regard. In the mornings, on our morning swims, we have an entire 50-meter pool to work with; a 10-lane, 50-meter pool. So, those are the other things that are nice for me. Now, let me explain a little bit about the pictures up here because I put each one of these guys in here for a reason.

These are some of the kids that I have been working with recently. The guy up here on the top, that's James Murphy. Does anybody know who James Murphy is? He's from the Virginia area originally. Okay, I point out James Murphy because I have had a lot of fun with James. He's going into his junior year next year and when James came to us, he was a 100, 200, and maybe 500 freestyler. I looked at James.

He is probably about my height, obviously a lot skinnier, but then I saw him swim and I am like, 'Okay, you got a good start and you can go, I don't know, 44 plus in a 100 free? That's not bad, but it's not really going to do anything college.' I said, "James, I think you are going to need to swim longer." He was like, "Oh, no, no, no." We went through this battle all freshman year, about 'what events are really going to be best for you?' He swam a reasonably good 500 his freshman year. He got under 4:20; didn't make NCAAs in the 200 free, which I know he was hoping because I don't think he really has that much speed and that is what he is dealing with.

We get into sophomore year and we start training him a little bit more for the long stuff. He never swam a mile his freshman year. Sophomore year, we go to our shave meet in December and he does not have a great 500. He is really feeling depressed. I talk to him a bit after. He comes to my room and we talk about how down he is and I am like, "James, okay, here's what we're going to do. We are going to come back, get a better 200, and then we're really going to

focus on putting together a good mile on Saturday." He is nervous about that because he hasn't swum a mile for years.

I said, "Don't worry, you are going to do just fine with this mile." So, we get around to the Saturday and he is entered within no time. He is swimming in the heat with two other guys in the first heat of the afternoon session. So, I said, "James, here's what we're going to do. About 45 minutes before you do the swim, you are going to drink a cup of coffee." He gets the coffee, drinks the coffee, and when we sit down I say, "Okay, now James, this is what we're doing. You're going to go in about 28 lows."

"You are going to go out real easy that first 50. I want you to go with 28 lows for the first 500, and after that you're going to start putting a little pressure on it. Try to go faster, try to feel like you're going a little faster each 50." That's what he does. He goes through a little bit faster each 50 and I said, 'If you are on pace, I will have both arms up like this so you can see real clear.' We are going through this whole 1650 and if you saw the splits, he practically descended the whole 1650 throughout. First crack at a 1650, he goes 15:08. I am like, 'James, your ass is mine now.'

[LAUGHS]

'You're a miler.' He was just shaking his head going, "Oh God, what have I done?" But, he is a natural for it. How many kids do that? How many kids swim a mile for the first time and they do it exactly the way they are supposed to do and they come out with a time like that? Then he goes to Pac 12s, and he improves on this significantly. I said, "James we are going to go a little bit faster going out and then we got to get to it a little bit earlier." He was still really tentative about it and he ended up going 14:54 in his second mile. Unfortunately, this year, that just missed making NCAAs individually. James is my example for 'your events choose you, you don't get to choose your events.' Your events choose you, and sometimes you have to fight those battles. My other two guys here, on the left down here is Johannes Calloni.

Johannes is an Italian swimmer, who has been in the United States since high school and he was a 15:16 long course coming in. He is just a great kid that is real quiet and does the work; he is a joy to coach. And fortunately, he did nothing but improve this year. He made NCAAs,

although he did not quite score. He got his 500 down to 4:16 and he went 14:45 in the mile. Then this last summer, he went and represented Italy at Junior Europeans and got three bronze medals in the 400, 800 and 1,500 and he missed silver every time by like maybe .2, .5, .3; but, a great summer all around for him.

You are going to be seeing great stuff from him. Then right next to him is one of my big projects for the next year. This is Matthew Hirschberger, who I am sure a lot of you have heard of. Matthew Hirschberger broke some of my Age Group records as a 15- 16-year-old and then he plateaued for a few years. He has not swum a best time since he was 16 years old. We got him close to his best times freshman year, but he's an example of where I am really trying to figure out what's going to work for him because he doesn't have a whole lot of speed and he does not really train short rest interval like True does.

The thing that we are going to be trying this next year to try to get him to that next level at NCAAs is we are going to try to work on a little bit more power because if you cannot be quick, then you got to develop power in the water. So, probably more pulling with the tube, more resistance training with Matt, but he had a really good college season and was really happy about his progress. Got down to 4:16, got under 15 minutes in the 1650 for the first time in a number of years, and he was really, really happy with that. All right. So, shifting gears a little bit now; I am going to talk about college format and what is specific to Stanford.

I don't want to come off as an elitist, but Stanford's just the greatest place in the world. Kids are really smart at Stanford and there's a lot of pressure in the classroom. They also do really well. Our men's team does really well in school. Out of 17 guys that were eligible to make Pac 12 Academic All-American team, we had 16 of them make it. Most of them, they are on the first and second team; only a couple of them were honorable mention.

The other thing that happens with us pretty consistently at Stanford is we will have at least two, sometimes three, guys in their fifth year. They are able to do co-term, and there are a lot of co-term programs at Stanford where what happens is you apply at the end of your junior year and when you get into these programs your

senior year you start taking graduate classes. You stop taking as many undergraduate classes and you actually end up finishing both your undergraduate degree and a master's degree at the end of that fifth year. But, in order to do that, you have to be one of the better students at Stanford and we have two or three guys do that all the time. So, what that does is that makes things at Stanford a little bit different in terms of how much we do in the pool.

I, as a coach, really believe that I have to have the utmost respect for my kids' time because I can't just have them do 20 hours of mandatory training and another four hours of voluntary training and put lots of work in so that they can hopefully be the best swimmers they can and not worry about anything else. You may be familiar with CARA. CARA are NCAA regulations concerning how many hours you can keep the kids.

You basically have 20 hours a week and you have to document that stuff every week; it gets sent into your compliance. Well, I can tell you- because I do CARA for the Stanford team- the only person I have that is doing 20 hours a week or more is True. Everybody else is probably 19, 18 and sometimes as low as 17. We are not even hitting 20. The reason that we do that, though, is because of that intensity in the school and it's also because of stress. The thing that I recognize as a coach is that stress. It does not matter if it's physical or mental stress, your body interprets it the same. When you are under a lot of stress in the classroom, it's going to result potentially in injuries or being tired and things like that.

So there's a limit to how much I can push and so I pad my schedule as a result. I really try to make it so that we are as efficient as possible in what we do. And then the last thing, the 'paralysis with analysis,' this is our particular cross to bear. Most of your Stanford kids are very cerebral when it comes to swimming. I always have to remind them that swimming is a physical activity, that at some point you got to learn to shut your head off. That is hard for a lot of my kids.

They want to keep analyzing; they want to keep going over this and going over that. Those are the things that are specific to us about what we have to work on. All right. Here are a few more specifics about how our season runs. This is our college season that I have got

summarized here. We are starting this Friday; the kids are all showing up and we fortunately don't start school until September 24th this year. I always say to recruits that this is a huge advantage for Stanford, I think, I know I appreciated it when I was a swimmer at Stanford. When I finished my summer season, I always had at least a few weeks where I could do nothing.

When you are going to school at the highest level and when you are trying to swim at the highest level, it's important to shut the engines down and do nothing for a while. You need to get bored at some point during the year, otherwise it is really hard to keep coming back. We start just swimming, September 7th. We build up really gradually. The whole team will train together. From September 7th until - it's a little different every year, but probably around October 10th or so- that's when we will start breaking down into specific groups. Then, from mid-October through Thanksgiving, that's where we will really get in the bulk of the really hard work that we will do in the fall.

We are really getting on calendar as quickly as I can. I am getting as much as I can out of them because starting at Thanksgiving, they go home for a few days. It is assumed that we are going to start to rest and then we will hit a shave meet the first week in December and try and get as many guys qualified for NCAAs as we can. Last year, I think we had well over half of our guys qualified in December for NCAAs and I prefer that. I want to continue doing that because when it comes to the other part of the season, Pac 12s, as it happened this year, they will finish around the 9th. I want people who are qualified for NCAAs starting to come down for Pac 12s and then finishing their taper on the way to NCAAs. That's the best way to have a good NCAA.

After our December meet, we have general training again because we are getting ready for finals and it is a high stress period. Really the biggest thing is to just keep them in the water and it is starting to get a little cold there and we swim outdoors. We want to make sure that they are getting enough sleep so they do not get sick. That is a little bit of a lull in the season there at that point. Then, they go home for a few days. Most of them have very good club teams that they can go to.

This year I think I am going to call a lot more club coaches and make sure that they are showing up. That way, if they are not showing up I'll make calls to them because kids can get a little too social during that period. Then we bring them back on December 27th and we have the most intense training of the year during winter break. It is fairly short because we start school January 7th. We got a little bit of time there to really throw it at them and then bury them and they can sleep all they want and then we start the competition phase. What happens there is we are back in school and we have a series of dual meets in conference, not a whole lot, because there's only six men's teams in the Pac 12.

It is not really that many meets; it is basically a meet against the Arizonas, it's a meet against USC and then it's a meet against Cal. Those are our three meets that we can have; guideposts along the way. But those meets are really, really important. They are tremendously important and just as an example, last year, we had a kid who was not able- for whatever reason academically- he was not able to compete for that part of the season, all he can do was train. It really affected his season.

He had a very poor Pac 12s as a result of that because he didn't really have any of those meets lining up. Even though we are not resting for those dual meets, it is still important to get in there and get your race wins and figure out what you are doing right and get yourself used to that other step that you need to take on race day. Then, lastly, Pac 12s ends what I call the competition phase and then we're in the championship phase, where we are really trying to get guys ready. In the championship phase, what we have done in previous years is we have cut loose the guys that did not make it to NAAs, but I know that this year we are not going to do that.

We are going to run a separate set of practices for the guys that did not make NAAs because what we ran into this year is we had a lot of guys come back that had not been on the NCAA team and then when they came back spring quarter and were trying to get in shape, they were further behind. What they did is they worked really, really hard and a lot of them got hurt. We are not doing the timeout there from March 9th to the two-and-a-half weeks that they'd be off there. We have got to keep them in the

water once a day during that phase so they are ready to do spring and get ready for summer training. Because even though the spring is a little bit difficult, and again, this is where I am stepping in the college sphere here and other college coaches would probably know what I am talking about here.

The thing that happens in that phase of the season is you are in a difficult spot because you can't require 20 hours. Because we're swimming and they are in water, we can be on deck and we can coach them because there is a safety exception. Usually because there's some type of qualifying meet, we can get an exception and offer the full amount of practices. But, we cannot require them to be there. That spring period of training is where your team culture is really, really important. Last spring, we had a lot of guys on the team that were very motivated about what they wanted to do in the summer and they were coming and getting it done. Johannes, Grant, Abe, and True- and the results spoke for themselves.

Those guys all did well at Nationals or wherever it is that they went, but then we had another section of the team that we need to work on. We need to work on getting those goals. Unfortunately, back when I was swimming, I think you could've had kids that were swimming college and they didn't really emphasize the summer season that much. But I don't think there's too many people that can get away with that anymore. It has just gotten so competitive and the biggest difference that I have seen in college swimming is just the sheer depth, if you go a second slower in the 500, you are going to drop eight places. If you go half a second slower in a 200, you are going to drop 13 places.

The swimmers are so much more consistent and there are so many more of them that it's just gotten really, really tough. So, that spring session is really, really important. All right. So that's the general flow of our season. This is the general cycle of our practices. We go Monday, Wednesday, Friday mornings from 6:30 to 9:00 and the swimming part of that is 6:30 to 7:45. So it's an hour and 15 minutes; it's always long course. We go long course.

We go long course Monday, Wednesday, and Friday mornings. It's good for aerobic and that tends to be more of an aerobic, not too taxing, practice. On my Wednesday mornings, I will make them swim something fast. We will do some fast

swims in varying distance and pick the intensity up because I want them getting used to swimming fast in the morning. But, that's only on Wednesdays and the reason is on Wednesday mornings is because on Wednesday afternoons we tend to run a recovery practice.

So, I'll hit them really hard on a Wednesday morning. There are some exceptions to that and I'll talk about that in a minute. Then, they do weights from about 8:00 to 9:00 o'clock. Then the afternoon practices on Tuesday Thursdays, we have a dry land circuit for a half hour and swim 3:30 to 5:30. Mondays, Wednesdays, and Fridays were 3:30 to 5:15. As you can see, there are a lot of programs out there they are spending a lot more time in the water. I can tell you that, a lot more time practicing. Some of them are more than 20 hours, but they classifying things as voluntary.

We do not do that at Stanford. Everything is going to be under 20 hours for the most part. Then, when it comes to the specific workouts, Ted and I come up with a schedule based on the personnel that we have. The reason for that is because one of the disadvantages that we have at Stanford is it's really, really hard to get in. We don't always have control. Like, I can't always recruit a balanced team because we might really need a backstroker, but academically there's just not one to be had. There's not one that we can get that's going to get in to the school.

So, we can have some really imbalanced teams. If you look at our roster, we are pretty imbalanced right now. I have got a lot of distance swimmers in our hammers; I got six guys swimming the 500 next year. I mean, that's a lot. But, that could be the way it is. Either way, Ted and I come up with a schedule that fits. So, right now what we are doing is on Monday afternoons, we have a distance group, a mid-distance group, and a breaststroke group.

In the breaststroke group is everybody that swims breaststroke or IM. Then, on Tuesdays, we have a sprint group, distance group and mid distance group. Wednesdays are recovery. I'll talk a little bit more about the distance work we do on Wednesdays with True in a little bit. Then Thursday afternoons, we have backstroke group. We have a power circuit and that's pretty much been it for the last year. Now, we might branch another group out this year, but it'll depend on

who we've got. Ted and I'll look at who we have and what groups do we need to come up with to make people's cycle of practices work? Because we really sit down and try to look at, 'Okay, what practices do you need to get?'

'What are you training for? What works for you and how do we organize these different pieces into groups?' because Ted and I also have to cover the 27 guys with myself, Ted and we usually have a volunteer assistant coach. For the last two years, we have had a volunteer assistant coach. His name is Joe Brinkman. He got hired as an assistant in Notre Dame and he was great. Joe was a great coach. I could count on him for anything; fantastic. We have a new guy this year and I think he's going to be the same. But either way, it's three coaches. So typically, we can do three, sometimes we can differentiate a little bit more and when we get into the practices. I'll show you some of the differentiation in sets.

It gets a little challenging with watch timing, but that's the way it works. Then, on Fridays, sometimes we will do things as a team. Very frequently we'll do five 400s as a team, where they descend one to three, back off on four, and five is all out and everybody gets to do it. The sprinters hate it; the distance swimmers, we like it. [LAUGHS] In general, when I look at my approach to my weeks, I try to do the longer stuff in the beginning of the week. Monday, Tuesday, and Wednesday, I'll typically be distance-oriented- very distance-oriented. Long repeats and then Thursday, Friday, Saturday will be more pace, more VO2max, more power, and that stuff. We are going to go through a cycle of practices in a little bit. I have some practices and I'll show some sets and you will get an idea for some of the stuff that we do.

But that's generally the flow because I like kids to get used to the idea of 'when it's the weekend, we swim fast.' Weekend timed relays. Put into miles on Monday, Tuesday, Wednesday; when it's the weekend, it's time to race. We are going to take a look at some sample practices now. What I have got here is if you think about the cycle, what I have done is I have pulled sample practices from each day at different times in the season just to give a smattering of what we do. This is an October practice on Monday.

Team warm-up. What that means is that everybody: sprinters, middle, distance,

everybody, does the same warm-up and it's usually somewhere between 600 and 1,000. It might be a straight 1,000. It might be a couple of 300s. It might be some 200s, it might have some more pulling, some choice, whatever. Everybody does the same thing because we try to keep the whole team together for the start. Then, after that team warm-up, I typically go through my warm-up phase.

Now, in general I believe in a lot of warm-up. I usually don't have kids trying to swim something particularly fast until we have done at least 3,500 and sometimes 4,000. They really need to get warmed up. Unfortunately, you would think Stanford kids would be smart and that when they got to a meet, they would realize that 'I need to warm up a lot, because that's what I do every day.' Nope.

[LAUGHS]

I have to tell them, "You need to swim more. That swim wasn't very good. How much did you warm-up?" 'Only about 1,500.' "Gee, let me ask you: how much do you typically do before you do anything fast in practice?" 'About 4,000.' "Aren't you usually better around 6,000 than you were at 4,000?" "Yeah." "Okay, well, you better do more." So, we will typically do paddles and buoy because I think it's easy and it helps them continue to get warmed up.

My warm-ups will almost always have stroke in them, so when I am recruiting I am almost always looking for IMers. I like IMers, it's my default. I like to see how people are doing in the IMX. I like to pull kids from there because that versatility is really important. And for me, this is one of the things when I was swimming, when I came to Ed, I was primarily a freestyler. I was swimming distance freestyle and dabbled in 400 IM, but training with Ed over the course of a couple of years, I became a much better IMer; surprisingly good at IM. Anyway, I like having IM in every practice.

We are always going to swim IM and I do not care if you can swim breaststroke or not, you better get better at it because you are going to do a lot of it. Then typically we will do descend type stuff at the end to try to get them moving because I am trying to teach them 'these are the kinds of things you need to do in a warm-up to get yourself ready to swim.' You will see in some of the other ones one of the other things that I do is I'll even have

like a secondary warm-up set. Here is a typical distance main set. Now, sometimes I have names. This practice, I believe, is from this year. Four 700s on seven minutes and tight descend, so I would tell them, 'All right, I don't want you to go in 6:58 on the first one and 6:20 on the third one.'

I'd rather have you go 6:50 and descend it down to a 6:38. Let's try to make it a tight descent. The same thing with the 300s there. Then we will do 200 recovery and then some fast-paced work. I use colors for describing things and with my distance swimmers will typically train in a lot of different colors in almost every main set. I want them to get the yardage in and the lower intensity sets in, but I also never want them to forget about what 500 pace is.

We will be doing that stuff all the time. So that's the distance set there. That would be True, Johannes, Matthew Hirschberger and then depending on the day, most days, I would typically put Grant in mid distance because he just does better with that. Grant does better with main sets that are 2,000 to 3,000. If he starts getting up over 3,000, that's just not effective with him. We learned that. Grant's not good at short rest interval, either.

I am much better if I give Grant 20 x 100s on 1:30, that's a better way to go for him. He'll do great repeats for 20 x 100s on 1:30, but if I try to get him to go 20 x 100s on a minute, that is not going to be so good. All right. This an example of what I will do with the mid-distance guys. I'll sneak in some low level aerobic with them so they are starting out with 5 x 400s. This is early season, too.

Five 400s, descending white to pink and I give them heart rates- about what white means, what pink means- as a guideline and I also try to tell them 'you need to know what your baseline heart rate is.' You should know what your resting pulse is. Take your resting pulse in the morning because that gives you an idea. If this guy over here has a resting pulse of 40 and this guy has a resting pulse of 55, well, guess whose heart rates are going to be higher? You are not going to have the same white and pink. Then 200 recovery.

Then, we hit the mid-range there really hard. Five 200 IMs, all red. That's the set Abe would love. Abe is a great swimmer to work with because I don't really have to give him a whole lot of direction. A year

ago, before, when he was leading into making the World Championship team in the 200 IM, I knew that there was a big swim coming with him because a lot of my practices that I'll write will be open-ended, especially in the mornings. I won't tell them how fast to swim something, but that entire spring, not one practice went by where Abe didn't do at least one thing that was incredibly fast and he was that way. He likes to just feel it. He likes to go out and just kill something.

It's always funny, I'll never forget when I first got to Stanford. It was the early season and I started giving my sets, doing my program, and I watched Abe and I remember one of the first practices, where it was just a freestyle aerobic set and he just attacked it. He just killed it. He's killing everybody and then about three quarters of the way through the set, the wheels start falling off and then he is toast. Then, he's hobbling through the rest of practice and he would just keep doing this in the Fall and I am just watching him I am thinking, "Hmm, should I tell him to pace himself?" and I just thought, "No, I think he knows what he's doing," and he did. Because a couple of weeks later, he's doing the same thing, but he's not dying anymore. He just would will himself into shape.

He has got a great internal perception about how he feels in the water, how to move in the water, and how to get himself going. This is the stuff that I love watching Abe do work on that. Like, on this set, even in October, Abe would descend down from a push to like maybe 1:47, 1:48 in practice in the 200 IM without too much trouble. So again, more recovery. And then, a little bit of really fast swimming for the mid-distance guys. All right.

We do a little bit of pulling, full-gear pulling. That means paddles, buoy, tube- a little doughnut tube, okay. I like the doughnut tubes for distance swimmers. I think it is really good for developing power in the water. When I first started pulling with a doughnut tube, I wanted to take it off and throw it. It's like, 'I can't move with this thing, it's horrible.' But, then I learned how to pull with a doughnut tube.

So, full-gear is paddles, buoy, and tube. So, the distance guys: six 200s on 2:20. Mid-distance, stretch out a 500 and then more 50s fast. And then especially early season, but most of the season, I will almost always have a controlled

warm-down because I need to make sure that they are swimming out. I want them to feel as good as they can the next day.

So that is five 100s, IM drill-swim is one of my favorite warm-downs. They drill the butterfly, drill the breaststroke, and swim the back and the free. It's pretty easy. Here's a Tuesday. Now, one of the things that happens on Tuesdays, which I am sure you'll be interested in is this is where my distance guys, once a week, the women have 11 lanes in one of our pool.

So, I'll take typically True, Johannes and then maybe a couple of others, Matthew if he's feeling good, sometimes Grant, if the set is conducive for it. They will swim in lanes 9, 10, 11 and then in lane 12, the first line of the women is Katie Ledecky.

[LAUGHS]

Greg and I coordinate on sets and if True or Johannes are not feeling their best, she will kick their asses.

[LAUGHS]

I mean, she swims really fast. Again, standard warm-up here. Team warm-up followed by a little bit of IM, a little bit of descend, and then this is one of my favorite 1650 type sets. It's basically three broken 1650s. Grant wouldn't be doing this set. They go 550s because we want to get them used to, 'What should my 550 be?' because conceptually- especially someone that's starting out- I want them to mentally descend the 550s.

Now, whether they actually do that... Hopefully the first 550 isn't too fast, they go faster on the second 5:50, and if they can hold it on the third, they are going to do fine. But you want to feel like you're building into the mile, it's too long of a swim to just attack from the beginning for most people. So again, the intervals: 5:40, that's pretty challenging. They are going 550s on 5:40, and then they get a 100 recovery in between on two minutes. That is a 5,000-yard set there that gets done in about 54, 55 minutes. Fun.

[LAUGHS]

Now, mid distance; Ed will recognize this set because this is one of the things that I go to all the time. This is something that we would do - the transition IM set. Training IM is all about working transitions. You got to be able to make your transitions from one stroke to the next.

You have got to figure out what is the best way for somebody to swim on IM. Abe, one of the things we worked out with Abe, is we realized that he needs to have his backstroke in perfect working order and he needs to be able to cruise the backstroke a little bit because he has got to jump on the breaststroke.

If he is really getting after the backstroke, his breast stroke is going to fall off. So, he has got to be able to cruise that backstroke a little bit. Transitions, working transitions, thinking transitions always is incorporated into the practice parameters. The transition IM set: you go a 100 fly, then you go 50 fly, 50 back, 100 back, 50 back, 50 breast, 100 breast, 50 breast, 50 free, 100 free, seven. Then we do it again with 50s. But either way, we're just working feel of transitions. And so the mid distance guys again are doing 200 IMs.

This is not a continuous week. This is just a sample Tuesday. I wouldn't happen to go 200 IMs two days in a row. But here, we're going trying to really fast. We are descending one to five, you take a minute extra rest and number six is really, really fast. Then, we go 6 x 100 IMs in the second part or we go a stroke because I have mid distance guys that would be a 200 backstrokers. They mix it up a little bit. Or, I'd have someone who is a mid-distance freestyler in this group and they would be going freestyle there.

The other thing that we tried to do is after these main sets, I try at least because sometimes the distance swimmers just go longer, but I try to time my main sets so that we have the same time spent on main sets. That is so we can come back in after sets and do those together. I try to keep my guys together as much as possible. 20 x 50s kick followed by two 300s paddles and buoy just working on distance per stroke. That is a warm-down right there.

Yeah, I had a swimmer who always liked to see how fast he could go with paddles and buoy and I would always make fun of him for that. I would tell him, "Hey, that's fat, old man swimming. That's what I do when I get in the water."

[LAUGHS]

Paddles and buoy is easy and he thought I was going to be impressed with how fast he could swim with paddles and buoy. I was like, 'Who cares?' Yeah?

[LAUGHS]

Male Speaker 4: What does WBA stand for?

Jeff Kostoff: Whole best average. Thanks. Yeah. Yeah, fortunately, working at Indiana got me into a really good habit of having all my practices on computer. I have got all my years of practices sitting on my computer. I'd go back and pull them up and work back through them or make changes as I want. Okay. Wednesday A.M. is a little bit tricky. Here is what happens on Wednesday A.M. It has not always been this way, but we have gotten back to it.

Funny story, so True shows up as a freshman and is full of energy. He is most often full of energy and he really, really, really is capable of incredible work. He shows up freshman year and for the first quarter, he is basically doing everything I tell him to do. I said, 'True, this is the program. This is what we're going to do. You are only going to lift on Mondays and Fridays and on Wednesday morning, you're going to go long. We're going to work you up to maybe 12,000 meters on a Wednesday morning practice. And then you're going to do recovery with everybody else with Wednesday afternoon.' Okay, we go through this program and True comes into our December meet and swims best times in the 500, 1650, everything, just all over the place. Makes his NCAAs and is great.

Then, about around the Cal meet, almost at February, I find out that True, on Tuesdays and Thursday mornings has been swimming on his own for 5,000 plus in the morning, and on Sundays sometimes, to get his yardage total up the way he wants to. He goes as much as like 8,000 to 10,000 on a Sunday. I was just thinking, 'Man, True. That is why you have not been swimming as fast as I want you to in practice. You've got to stop doing that.' True and I have gone around in circles for two years now and starting last spring, he realized he's been swimming too much.

We are going to get back to this cycle, which worked the first time and that's why you see True and Liam up here. Because poor Liam, his junior year, I made him do this stuff with True so True would not be by himself and that really wasn't what Liam should be doing. That is why in his senior year, he didn't do this. We took him off that program. I put Liam on a much shorter cycle and he got back into finals in the 500 free at NCAAs.

Anyway, what happens here is a little bit confusing.

The whole team is coming in on Wednesday morning and they have their usual hour and 15 minutes. True and Liam are doing the warm-up with everybody else. That's the 12 x 50s and then the nine 100s after the team warm-up. Then, I branched them off and then you get to do this fun set where they go four times through two 400s and a 600. So, the 400s they are descending from 4:30 to about 4:18, 4:19, which is reasonably fast. It is not killer fast; long course, it's reasonably fast. And then the 600s are just paddles and buoy.

So, I am letting them recover. That is 1,400 four times. 5,600 meters there for them and then their next set after that, we did some paddles-buoy-band with some hard pulling. Then after that we did some kick and then, what's confusing is, everybody else went 20 x 50s as described there. A 400 kick, a 300 swim and then they are out doing weights. I kept True and Liam in there and they are going long. And this year, for the Wednesdays, that will be True and Johannes and maybe Hirschberger, I don't know. I got to wait and see how he is responding and how things are going when I wait and see whether I think those are going to be productive for him. We will come back to some guidelines here at the end for how it is that I am evaluating what people are doing in the water.

That's Wednesday morning, Wednesday afternoon is generally a recovery practice. We will do video work, we will do easy stuff, we'll have a team meeting, and then we'll come back. We have Thursday morning off. Now, one thing I should also say as an aside, I didn't write it down here, but one of the things that True does do is True also in his cycle now trains with Katie on Tuesday, Thursday mornings.

True's cycle is double Monday, double Tuesday, hard Wednesday morning, recovery Wednesday afternoon, double Thursday, double Friday and then Saturday morning. He does the Tuesday morning practice with Katie; it is usually some mid distance repeats, 200s, 300s type stuff and then the first day practice is very tempo oriented and it's always long course. Greg mostly writes those practices and I come there and help True get through those practices and we'll see if we want to keep going with that. Based on this summer's results, True was probably not terribly happy with how he

came out this summer and we will have to talk about it this fall as to what he wants to do going forward. That is very typical of what I do with the kids that I work with, especially the kids that are very into their swimming.

I like to be as approachable as I possibly can be because I firmly believe that if you believe in what you're doing, it's got the best chance of working. I am very flexible in terms of hashing out ideas and figuring out how we can make it work because I think True has a really good shot at making the Olympic team in 2020. He definitely has the work ethic, he has the talent and I want to do everything I can to there to get him there. If that means I am coming in at odd hours or doing whatever, that's fine because the kid puts in the work and to me that's most of it.

Thursday, Thursday P.M. we're starting to get a little bit more speed in here and this one is actually from last year.

This is my first year at Stanford, you'll see the personnel breaks out. I have a lot of different main sets going on. This is very typical of what I do pretty frequently. My typical warm-up in here you will probably recognize a bit of that from the earlier practices. Some 25s get in there and then this pre-set is something that they got really used to. It would almost always be 300s. They got really used to doing 300s and I would always tell them- I had 200 backstrokers, I had 200 flyers, I had IMers- and I'd say, 'Yeah, this is actually an easy preset on 3:30.'

Sometimes, I have them go on 3:10. I'd say, 'You need to be able to do three 300s on 3:10. You need to hold them right around three minutes and that shouldn't be hard.' At first, they were looking at me like you're crazy, by the end of the season, I had Patrick Conaton, a 200 backstroker saying, yeah, it's easy. He would do that in warm-ups now. When he'd go to a dual meet, he can do three 300s because he knew that swimming three 300s at that level is what really got him warmed up. He was really ready to go after that. Now, what's added here as well is the white four. Now, I'll start doing white four a lot after winter break training and what that means simply is you're at a white pulse rate.

You are around a 140-heart rate or so and you're breathing every four strokes. What that little adjustment does is it makes you restrict your oxygen a little bit

so that it artificially boosts your heart rate up so you're not pulling as hard to get your heart rate up. I think it's a little bit easier on you in terms of how hard you're having to pull the water to get your heart rate up. I'll start throwing in a lot of white four as we are getting in that competition phase and in the spring, because I think it's just a little bit easier. But, I still want their elevated pulse rate in that range to get them warmed up and add the aerobic.

Okay, so here's a differentiated main set. This is my first year at Stanford, this is Jimmy Yoder and Will MacMillan. They are both 200 flyers. They are going four times through a 100 and then a 50 and then four 25s; the 100s on 1:30, the 50s on 50, the 25s on 40. We're going freestyle, heart rate 150 and then fly 200 pace. The 100 is freestyle, the 50 is fly 200 pace and the 25s are sprint alternating fly and free. They are going through that four times and then we have a similar variation with Curtis Ogren, Max Williamson and Abe Devine. Similar cycle there, and then freestylers, just more rounds mostly freestyle. This is a Thursday pace-oriented practice. This was a practice where I am really glad that I have a volunteer coach that is competent because I cannot time that many people. That's a lot of watches to keep on the water. Then coming out of it, we are doing white four again and then a little bit of kick and a little loosen. I am sorry, I should've pointed out the date at the beginning of this.

This is February 9th, so a little bit later season Thursday. Now, this one is a Friday and this is right around the end of winter break training and this was from this year. Typical warm-up, again. Now, what we're working though is we got three main sets going on here and this is power work. This is actually a variation of a set that I got while I was at Indiana. The guys here at the top, this is basically anybody that swims in IM. They are doing buckets with medium amount of water, they go five 25s with the buckets with fins. Fly, those are all fast on 1:10 and then they are going to through this four times, one each stroke. They keep going through this cycle.

We go 50 build on :50, 25 shooter -which is where you go kick underwater and then a 25 fast on :30; each stroke. And then, we have a 200 to swim out, that's the first piece of the set. Then the second piece, they go back to buckets again. But, this time they are going

backstroke with paddles, fast tempo. Then, we go four 100s, fly back, back breast, breast free and then one all IM and those are pretty much all fast. 200 swim out. Five buckets again - now, this one's actually really tricky with the weight. But I find that this is the one that's really, really good for breast stroke. Instead of doing two kick, one pull, they are doing two pulls one kick. When you are dragging the weight from a bucket and trying to do two arm stroke pulls breaststroke with one kick, it's hard.

You got to really get those pulls in fast to keep moving forward. And I can tell you it was fun watching that because Abe, he got it like that. He was moving that bucket forward instantly. Everybody else was really struggling for two or three of those 25s before they figured it out. And then they finish up this set, they do some 50s at 400 IM pace on a minute and then we got five buckets and then a 200 IM for time. That set was a killer and it's early January.

This is when you are supposed to be killing them, but it was a killer set. But the thing that was great about this was it was one of our better days this year coming out of winter break training. They all knew it was really, really hard, but they liked it. They loved the variety that was in this set, it really kept them engaged and they kept at it. The intensity was great. I remember being very happy with that day. Then the freestylers did a similar set where they are doing buckets, paddles, 500 stroke counts, six beat kick.

They are trying to pull a bucket, get across in their 500-stroke count with paddles so that helps a little bit. If they are in an 11-stroke freestyle 500 freestyler or 12-stroke 500 freestyler, that's what they are supposed to hit. Then, we go five 100s at 500 pace. 200 swim out same thing. Then a little bit more rest, 200 swim out, and then we do some 50s. Then, lastly, we finished up with some 25s at the end. They had to go fast 25s, but after you have done all that stuff, the fast 25s are easy. You actually feel good doing those.

Then we have our controlled swim out, the four 200s, HR 140. True had his own set that day. He got to do five 500s, and then some 200s, and then he jumped in with these guys up around where they were doing their 50s and their 25s. He didn't do the buckets, but he came in and did some pace work with them at the end because he'll do buckets, he'll be power phase at a certain time in the season, but

for True it's usually coming right close to competition. He'd rather swim long at other times, keeps his yardage out. That's a Friday evening and then lastly Saturday.

This is a Saturday from February, so it's middle of the road. I started to break people out a lot more based on what they are preparing for. In here, I've got some pretty good differentiation. We have got three guys who swim the 500, but they are different 500 freestylers from Johannes and True. I had Liam, James and Hirsch split out. So again, post warm-up set: three 400s, negative split, that's what the NS means. But I just want them to go way under 3:55 and for those three guys, that's pretty easy. Then we are going some fast 200s descend, then come back with a little 200 pace on the 50s. Okay.

This is three weeks out of Pac 12s on a Saturday morning. Then we had a similar set for the IMers so they could stay together there on those 400s. Their 200s were on a slightly different interval. But then everything else was fairly similar there. Then last, we had Johannes and True going a little bit further. Patrick Conaton was red shirting this year. He had a surgery that he had to do.

We were just keeping him swimming as best we could this year and hopefully he'll be back this Fall. Then everybody came back and did a little bit of a warm-down. So, those are some sample practices there from the cycle. We are not too far over. I think I have just a couple of things left here. Generally, these are some of the things when I am working with my swimmers, this is what my guidelines are. I want them to be successful in at least 70 percent of their practices.

If they are dropping below being successful in 70 percent of their practices, I need to change what they are doing. Unless there's something going on like they've been sick or there's something academic, but either way I'll talk to them about it. When I notice that, 'You have had too many bad practices in a row. I look back at a week and you didn't really have a good practice four days ago,' then I want to either find a reason for why that's the case or we're going to change things. If I have a couple of weeks of that, then we are going to look at the cycle or whatever it is that we're running and we might move you from one practice one day to something else to try to change things up. Or, tell me, what do you think is going to

work for you? Tell me what you think you need that's going to help and I will try to write that in the practices.

Now, on the other hand, I don't want them to be successful much more than 90 percent because then I am not pushing them hard enough. If they are killing every practice then they could do more. This was definitely the case for me. Swimming fast in practice is your reward. This is what keeps you motivated. If you are not swimming fast in practice, if you are not enjoying practice most of the time, you are going to burn out. It is really, really important to feel good about what you are doing and to feel like you are getting better and to try to structure things and to work with the kids as much as you can to get them to that point. And then lastly, I said this as a swimmer, workout is pain experiment.

This is where you could figure out how much you can take and this is one of the reasons why it was always valuable for me to run cross-country. Cross-country hurt a lot. Three-mile races, all out pretty much. It was a lot of pain and helped your pain tolerance. And then, you just got to go there pretty consistently. The best swimmers do, always. The thing that I have also noticed- Abe is a great example of this.

Like I said earlier, I don't have to give him a whole lot of direction about how to swim fast. I just have to give him the opportunities and then he will take care of it. He is very independently minded that way and kinesthetically aware of where he is in the water. Yes?

Male Speaker 5: Not much kicking?

Jeff Kostoff: Yeah, it has more kicking at the end. Kids better kick when they are swimming.

[LAUGHS]

I mean, let me be a little more direct. In the recruiting process, if you're not a very good kicker I am probably not going to recruit you because you cannot really get away with that anymore. I mean, back in my day, you would have lots of distance swimmers that were two beat kickers and you might still have some of that now, but I think about the only event that you can get away with that anymore is the mile. I mean, there's no other event that you can be good in and not be a really good kicker. All right. So here we are. Other questions? Okay, yes?

Male Speaker 6: How do you incorporate stroke count with these guys?

Jeff Kostoff: Work with them on it and you look at their races. I mean, even tired races in the mid-season are so important to figure out what those should be.

Male Speaker 6: Right.

Jeff Kostoff: They should know what their stroke counts are. I wouldn't necessarily say it's 'always lower the better.' It is a combination of the two. Because I am also looking at stroke rates. So, you need to have a certain turnover and you should be getting across the pool in a certain time.

Male Speaker 6: And so, whenever you're doing pace, you want them hitting that?

Jeff Kostoff: Hitting stroke counts, yeah. Most of the time.

Male Speaker 6: Yeah.

Jeff Kostoff: Most of the time. Sometimes, we will just be like, "Hey, I don't care how you do it; you need to do this time. Just get it done."

Male Speaker 6: Yeah, okay.

Male Speaker 7: Yeah, you said 70% successful and then not over 90%.

Jeff Kostoff: Yeah.

Male Speaker 7: First question, how did you come up with that idea? And then, the second one is: what are the things you consider success in practice?

Jeff Kostoff: Successful? Being able to make the practice, being able to swim repeats that are in the range of what you should be swimming. For some practices, that's not hard and that's why I think 70 percent is a pretty fair number because a lot of practices sets will be heart rate related and I'll tell them that, 'All I want you to do on this is hit the heart rate. You hit the heart rate, I don't care what the time is right now.' But then, in some of those practices, they are needing to hit certain times. If you're a 200 flier and we'd gone two weeks and you haven't been able to hit, 24.5 for a pace 50 fly, then we got to do something different. Back?

Male Speaker 8: Yeah, you said they go weights Monday, Wednesday and Friday. Can you talk a little bit about what

they do in there now that they are doing something different than the sprinters?

Jeff Kostoff: We have a weight coach and the weight coach puts together a program for the different groups. They will be similar in what they do. They are doing your typical heavy lifting. They would be doing a lot of dead lifts, squat, and a little bit of bench press. Then they will do some circuit type work, but it varies. The sprinters will generally lift heavier than the distance swimmers, but it's varied. I've concluded with the distance swimmers that most of the guys that the mile is their best event. I am going to pull them back even more from weights because I don't think it's really very effective. That was the other thing True was doing this year. He was staying after with the weight coach and lifting an extra hour. So, he was lifting six hours a week. I don't think that's effective at all. This year, I am going to spend a lot more time in the weight room watching more closely what's being done there. Yes?

Male Speaker 9: And your white fours? You have swimmers swimming white fours.

Jeff Kostoff: Yup.

Male Speaker 9: Does the four comment on bilateral breathing at all? I would consider three or five allowing you to breathe to both sides?

Jeff Kostoff: Well, if they wanted to do five they could.

[LAUGHS]

I think three might be too little. There's almost always a breathing pattern when they pull to try to get them to go back to both sides, but I know that's the way I was as a swimmer. I would always breathe to one side, and so when I did pulling, then I would breathe both sides. But when it came to racing, I was always breathing every stroke. I mean, they certainly could do white five, that would work, too. But, white three might be a little too easy. Yes?

Male Speaker 10: How do you differ the tapers based on True grinding more aerobic work and Grant with more power?

Jeff Kostoff: Well, the thing that is interesting about Grant is that he really does not taper much either. He stays high in the yardage. He is more even all along. Like, as an example, last summer Grant made the University Games team at World

Championship Trials and he went 7:57 in the 800. So, he came back from World Championship Trials and that entire summer he did not do a practice longer than 5,500 meters for the rest of the summer. He went 7:53 in Taiwan.

He went four seconds faster in the 800

I realized - it was actually one of the things that I remember reading- have you ever heard of the book called Top Dog? It is actually a really interesting book. It's written by this guy who basically went after, 'what is it that makes people excel?' and he looks at a lot of different things. One of the things that he comes across that really spoke to me, and this has been borne out in what I've observed in a lot of swimmers, is that there was a study done once where they took just a smattering of regular people and they had them do aerobic training.

Walking, or whatever it is that they did, and then they measured them over a period of time to see how they responded to aerobic training. What they found was about 20% of the population it did absolutely nothing for them. They did not get better at all. Then of the ones that were remaining, there is a continuum. And on the continuum, some people get aerobically trained a lot faster. I would definitely say that on that continuum, Grant is on the far end. Grant can get in shape in two weeks and with not that much. And Abe is similar, for those two guys it doesn't take a whole lot of aerobic to get them up to where they need to be. Whereas, True, needs to work out a lot more.

I should go back and grab that book and take a look at the footnotes and see if I can find more about the study because I'd like to figure out if there's a way to be able to test that sort of capacity because I think that's a significant piece of it. I think that when you take guys like Grant, who can get that aerobic training very quickly, if you try to make them do traditional distance, you will grind them out. It is very counterproductive. But in answer to your question, with that, Grant really only needs to taper maybe 10 days. He can because he never really goes up that high and then he will just come down and the taper will be much more gradual.

Most of the guys that I have worked with- even Abe, he'll still be going 3,000 at practice. Now, in a taper he's not going to double every day, but he'll be going 3,000 in a practice. There is always a little bit of low level aerobic because I know that that keeps him going

and then something a little bit faster. True probably, I don't know, I think he needs to taper more. I don't think he realizes how much he needs to taper, we're still working on it. That is the other thing that is challenging when I look at it because I remember having this conversation with True.

'Okay, you're telling me about times that you swam and tapers that you did when you were 16 years old. You are not 16 years old anymore. Okay. You are going to have to rest more.' And trying to get them wrapped around that mentally, I think, can be challenging at times. Yes?

Male Speaker 11: Are you doing anything special with physiology testing, VO2 Max bags, or anything?

Jeff Kostoff: We have started to try to talk to some people that do that. Ted and I have had a couple of meetings and we are going to try to do more of that because I know there are some people there that can figure that stuff out for us and it would be useful. I am also really interested. One of the things I will throw that to you - if anybody knows of anything- I'd been starting to look at various video analysis and software programs.

If anybody knows something that I should be looking at, I want to pick something to work with in a more organized fashion. I know there's a couple of platforms out there and I would be really interested to hear about what you think is effective and I think the key with some of the ones that I have seen is it needs to be not too difficult to use. If it's a big production to set it up, you are not going to use it that much, but if anybody's got some input for that, I will take it. Other questions? Yes. Sorry, in the front.

Male Speaker 12: Who does the weight for the NCAA team?

Jeff Kostoff: We have a weight coach that's assigned to us and his name is Coach Abe and he's been with us for one year. We had one guy before that for two years. This was the case when I was in Indiana as well, unfortunately, in the world of college athletic department weight training, the swim team is not a plum gig.

[LAUGHS]

It is not that the guys that you get are not good coaches, they are good coaches.

It is just they don't stay. They are looking to get to basketball and football and other things like that. I have realized that I probably need to exercise more control in that regard and look at what it is that we are doing more specifically, especially for differentiation purposes. Do you have another question? Yeah?

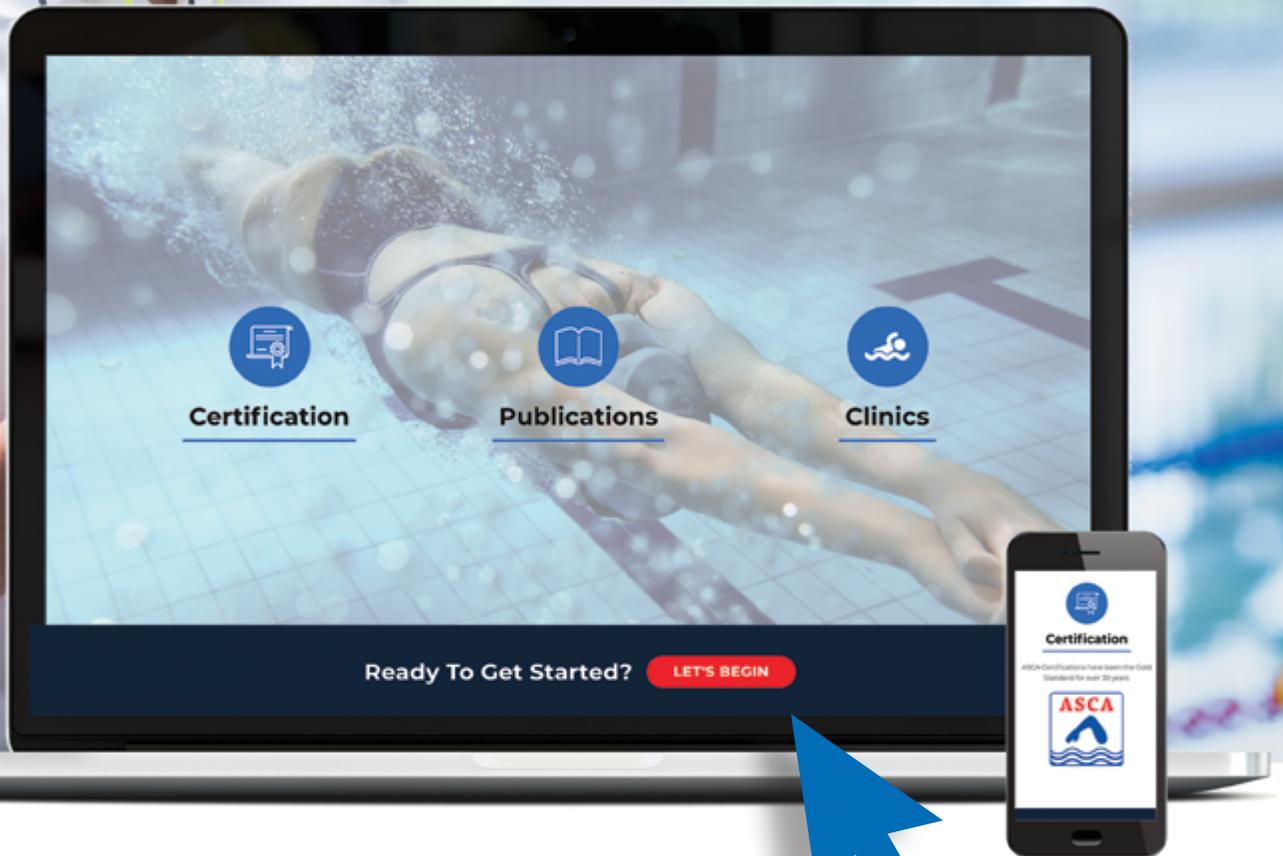
Male Speaker 12: Could you talk a bit more about your recovery days?

Jeff Kostoff: Well, traditionally on our Wednesdays, we haven't done a whole lot and we're moving away from that this year. We are still going to do recoveries on Wednesday afternoons, but there is going to be some purpose to it. It is not just going to be 'swim easy for 20 minutes.' I want to incorporate more video. There's a lot of good video stuff out there, but I want to use video in a way that's constructive and not just 'video to be doing video.'

I think there's a lot of useful tools out there, but I am a little nervous about being in a situation where kids want to look at that stuff all the time because I think technique is something that you need to see, but you need to feel and you have to be able to self-monitor it. If you're always watching it, it also can take away from work. I try to tell my kids, when I was always working really, really hard, I wasn't thinking about much other than tolerating the pain. You do have to think about certain things like, where you're placing your hand and how you're pulling through and things like that. But I think most of my energy was directed at just trying to swim fast and willing myself to swim fast. Thank you! ■



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