

Fun, Fitness, Friendship & Participation

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Waves

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Open Water Swimming & Injury Prevention

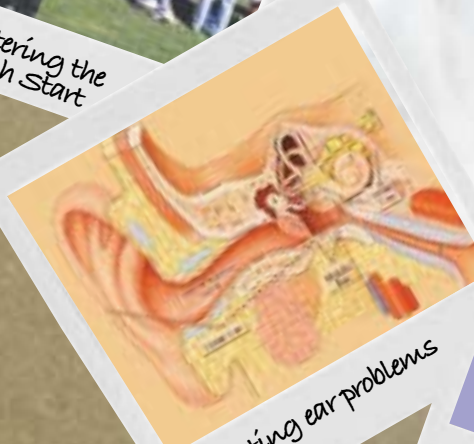
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INJURY PREVENTION

- 4 ROUTINE MAINTENANCE**
Do you have an "itis" that ails you? If so, here are some dos and don'ts to you help maintain an injury free body.
- 6 GETTING TO THE CORE OF SWIMMING**
Core strength is essential to avoid injuries. Here are five ways to strengthen your core, prevent injuries and improve your technique.
- 15 INJURY PREVENTION WITH SHOULDER STABILIZATION**
Muscle imbalance or inefficiency can lead to a devastating shoulder injury. Optimize your swimming with dryland shoulder stabilization exercises.
- 7 EAR PROBLEMS AMONG SWIMMERS**
Shoulders and knees may steal the spotlight when it comes to swimming injuries, but ear problems can plague serious fitness swimmers.

OPEN WATER SWIMMING

- 8 WETSUIT LESSONS**
There is an obvious difference in speed between wetsuit and "nekkid" swimmers, but more speed is probably not the most important wetsuit advantage.
- 10 MASTERING THE OPEN WATER START**
Open water swimming can be intimidating for the most accomplished pool swimmer, but a great start can make for a great swim.
- 11 2004 OPEN WATER SWIM MEETS**
Love to travel and swim? Plan your summer holidays around these swims.
- 4 PRESIDENT'S REPORT** Chris Smith on happenings at MSC.
- 13 GEAR REVIEW** The RaceTek system is both high-tech and interactive.
- 14 MASTERS PROFILE** Dr. Hui Lee
- 15 DIVING AHEAD** Upcoming meets
- 15 CONTACT US** MSC board, volunteer and staff contacts.

WETSUITS LESSONS

By Terry Laughlin

My email recently brought this message: “I find that I’m several minutes slower for a mile in the ocean without my wetsuit. What causes the difference in speed? If it were just buoyancy, why do some swimmers gain more with a wetsuit than others? And, finally, how can I minimize these differences to go faster without the suit?”

There is an obvious difference in speed between wetsuit and “nekkid” swimming. The less skilled the swimmer, the more dramatic the difference. Which tells us that the main advantage of neoprene is that it partially compensates for the absence of some basic skill. Because better swimmers have less of a skill deficit, they gain less advantage with a wetsuit.

I personally have only 10 minutes of wetsuit experience, but after swimming in open water with a group of mostly novice swimmers during a Total Immersion triathlon camp in late August of 2000, I recognized that more speed is probably not the most important wetsuit advantage. Ease and control are very likely the more critical benefits.

We opened the camp in Killington, Vermont, with several days devoted to mastering TI drills, and had done only a few lengths of whole-stroke swimming, before we went to Chittenden Reservoir for our first open-water experiments with applying our pool lessons. The coaches swam without wetsuits; our students—several of whom had never been in open water before—were neoprene-clad. Our first reservoir session was limited to brief stretches of 40 to 60 strokes, simply to acclimate to swimming without lane lines and walls, and to experience the disorientation and general unease that can happen in open water. We swam slowly

enough for everyone to maintain proximity for the short distances we traversed, spending about 45 minutes practicing basic navigation skills, such as how to sight and breathe while maintaining balance and rhythm and close-order drafting.

Two days later, we returned for a final open-water rehearsal before the Vermont State Triathlon Championships, which would be the “final exam” for our 6-day camp. The plan was to swim a triangular course of about 1200 meters. The first leg was roughly 300 meters to a well-marked rocky point on the east shore. Then, after reconnoitering, we planned to cross 600 meters to a boathouse on the west shore, before returning the final 300 meters to the boat ramp from which we started.

On the first leg, two or three faster swimmers (who had some club or school swimming experience) took off at a brisk pace. Immediately, most of the 20-some other campers, anxious not to get left behind, took up the chase. And just as quickly, all the week’s hard-won lessons in efficiency were forgotten, as most degenerated into churning. There were many discouraged looks and heaving chests at our first checkpoint. Before beginning the long east-west leg, I reminded everyone to swim as slowly as necessary to cultivate a sense of comfort and control. “Just start out at a leisurely pace—like a warmup—and find a rhythm and pace that you can maintain indefinitely. Keep the group in sight, but don’t try to keep up. Do whatever it takes to stay relaxed and controlled. As soon as you feel yourself getting rough, slow down until you ‘find your groove’ again.”

On the second leg, the difference in “group flow” was marked. From my vantage point bringing up the rear, it was apparent that splashing and flailing had been replaced by smooth, controlled movement. And the

group did a much better job of staying together, despite the increased swimming distance. When we gathered again, long faces had been replaced by pleased smiles and indications of pleasure. “That actually felt good,” someone said.

After a brief stop, we set off again for the final 300-meter leg to our starting point. When everyone had finished, there was palpable elation over what they had done and how they felt. Several stood on the boat ramp surveying the course and shaking their heads. “I can’t believe we just swam that far. Not only that, I could go back out right now and do it again.” Which is just what several did, wading back in to do another quarter-mile, one saying: “That felt so good, I just want to keep swimming.”

Back at the lodge that night, we reviewed our reservoir experiences and summed up the lessons learned:

No matter how much you may have practiced efficiency in the pool, once the gun sounds and the pack heads toward open water, it’s easy to lose your wits. All your instincts are warning you not to fall back. Chasing the leaders—or anyone in front of you—is your main thought.

Unless you have a lot of experience in swimming races (i.e., competitive swimming), and particularly experience racing in open water, chasing quickly degenerates into churning.

Once you begin churning, the most likely result is more rapid exhaustion, anxiety, and loss of any feeling of being in control, and no material gain in speed.

If you just stop chasing and find your own best pace, the whole experience gets a lot better and probably will not be tiring at all.

Your race plan should be dictated by your degree of swimming experience. Elite swimmers-turned-triathletes had years of practice swimming at high speeds before they

Five things to think about when you wear a wetsuit

1. Because balance will become a “no-brainer,” you won’t have to focus on swimming downhill. Your hips and legs should be light and riding high.

2. Even though you won’t pay as heavy a penalty for doing so, you should still avoid a high head position. Your movements will be smoother and more fluent because your body likes head-spine alignment and is designed to work best that way. So keep looking down as you swim—except when getting your bearings.

3. Keep focused on lengthening your body with each stroke. Let the pull part of the stroke just happen on its own, while you keep thinking about how you slide each hand into the water and extend it, like putting your arm into a sleeve. Once your stroking hand passes your head, shift your attention to the one extending forward.

4. Set and change your stroke tempo in the core. If you’re moving at a comfortable pace, then maintain that pace with a relaxed body-rolling tempo. If you do decide to go a bit faster, do it by moving your belly-button faster, not your arms and legs.

5. Avoid over-swimming and loss of control by making sure you feel your hands are moving at the same speed as your body. Swim with your whole body as a unit, not with your arms and legs

ever raced a triathlon. It took them millions of yards - in training and racing - to learn to tolerate high heart rates and stroke rates without blowing up. Athletes who lack such experience can acquire some measure of that knack, but it takes years of patient, purposeful practice. But every athlete can learn, from the very start, how to use a wetsuit intelligently to gain control and save critical energy. Toward that end, here’s how to turn a wetsuit to your advantage.

More than anything, a wetsuit takes away the feeling that you have to keep your arms turning over just to keep from sinking. Take advantage of that by relaxing and enjoy the wonderful and rare security of feeling completely supported by the water.

Once you feel supported, you can use your arms to lengthen your bodyline on each stroke. Take all the time you need to extend your fingertips fully - almost as if stretching for something just out of reach - before anchoring your hand for the pull. Even more important, take your time on the reach. Keep your stroke tempo, and all your movements, feeling almost leisurely.

Especially at the beginning of the race, stay well within yourself. Go even slower than you think necessary. This will allow you to establish a sense of calm and control. Use that control to focus on one or two specific points of technique. Make sure your head is in line with your body...or that you feel as if you’re slipping through a small hole in the water...or that you feel arms, legs, and body moving in sync.

Once you “find your groove,” if you think it feels too easy, don’t be in a hurry to start chasing faster swimmers. Just drop in behind someone moving at what feels like a pace you could sustain indefinitely and glide along. At the end of the day, you’ll gain far more time, if you just keep your heart rate down, than if you try to catch or stay with faster swimmers. You’ll probably find yourself passing dozens of competitors on the bike or run if you swim more economically than they do. In fact, you’ll even pass some of them during the latter stages of the swim--without even trying—simply because as you just keep moving at a relaxed, sustainable pace, other people who started too fast will come back to you.

And just as our camp group did at Chittenden Reservoir, it’s a good idea to do an open-water “rehearsal” in your wetsuit, focused on leisure. Pre-race warmup should also be used for one final imprinting of ease and control.

What about pool practice and how you swim without a wetsuit? Don’t make the mistake of thinking “It really doesn’t matter how I train because my wetsuit will forgive a multitude of sins.” Remember: you’ll do only about five percent of all your swimming with the wetsuit but you’ll be building critical muscle memory on the other 95 percent. If you practice a flat, barge-like, windup-toy stroke, it will be more difficult to change that on race day. Focus on becoming the most balanced, most fluent and economical “nekkid” swimmer you can be when in the pool and, on race day, you’ll be both more economical and faster. Improve your stroke length and coordination without the wetsuit and both will be far better on race day than other wetsuit-wearing swimmers who haven’t developed the skills you have. 🌿

Terry Laughlin is founder and director of Total Immersion Swimming, the world’s foremost teacher of swimming-improvement. See info and watch sample video clips from his new video Freestyle Made Easy at www.totalimmersion.net.

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Mastering the Beach Start

Open Water Race Tactics

By Neil Harvey

Racing in the open water can challenge even the fastest pool swimmer. The number of decisions and variables is large. Water conditions can vary from cold and very wavy, to a glass smooth lake. The start itself can have from 20 to 100 racers at a time. Your warm-up may have lasted 2 to 10 minutes. Depending on your ranking you may or may not have a good line to the first turn. The start may be from a pontoon, a running beach start, a deep water start or a waist deep start. In this article we will focus on the running beach start and the first 50-400 meters of the swim. The first 50 meters of any race presents a number of challenges. The swimming stroke changes considerably when you are being bashed from all sides, with the water is churning white with little or no smooth water to grab on to.

Here are the steps to mastering the beach start.

1. Anticipate the start. Getting even a sight lead on the run-in can provide you with clean water to swim in during the crucial first 25 meters.
2. Learn to use the shallow water to your benefit. As each step (keep the knees high over the water at this point) takes you deeper into the water you must prepare for the launch step. It resembles the hitch step high jumpers use on the 3rd and 2nd last steps prior to the jump. The hitch transfers momentum timing to the final leg push-off. The resulting increase in 'jump' allows the athlete to travel further over the water on the dive instead of through it. The jump occurs when the water is just above the knee. You will need to practice this sequence many times in order to feel comfortable.
3. Once you have left the ground, tuck the head in-between the arms and reach forward in a perfectly streamlined position. The speed you gained from the launch sequence must be maintained through the entry. Kick soon after entry and when acceleration has reached maximum, you are stretched out just below the water surface. If you are efficient at dolphin kick try using it for a few meters underwater. Begin the swimming strokes.
4. The first 25 to 50 meters are done at nearly full speed. Maintain a stroke rate near your functional maximum. Keep your head down except to check positioning. Use the kick near full effort also. At the same time, try to remain calm and relaxed. You can swim fast without breath holding and body tension. Keep the stroke rate up but loose. Do not over-accelerate the strokes. Apply clean smooth power to the water. This procedure will keep your heart rate from rising too quickly.
5. If there is a swell in the ocean you will need to practice moving through the waves at the start and during the race. A slight dolphin action helps transition through each wave. On the start you will have to assess each wave and how to get through it. On the run in, as long as the water is knee deep or lower you should practice jumping over and then launching into the dive. If a wave breaks in front of you, dive through the middle of it and stay under water using a dolphin kick until the wave has well passed.
6. Once you are past the critical first 50 meters, if you intend to keep up to the leaders, you must 'hurt' the next 300 or so. You will find that most people will settle into the race pace early and lose momentum too soon. Remember you have the last 1000 meters to flush out any lactate. When 300-400 meters have passed look around for someone to draft on. Settle in on their hip and draft away! 🌸

Neil Harvey has coached competitive swimmers for over 20 years. He is a coach with the National Triathlon Centre and is also the head coach of the Tye Aquatics Club in Victoria, BC. Contact Neil by emailing him at neilharvey@telus.net. For a list of open water swim meets, see the Diving Ahead calendar on page 15.

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Routine Maintenance



Do's and Don'ts for Injury Prevention

By Dr. Mark Erwin

The thrill of competition, improving your physical fitness, weight loss, friendship and non-impact aspect of the sport of swimming are amongst the reasons why Masters swimming continues to grow in popularity. However, there are a few inescapable realities that one must confront at times and that is that along with exercise comes the reality of aches and pains. As difficult as it may be for some of us to accept, the physical realities of a 46 year old swimming 4,500 to 6,000 metres per day, 5 days a week just isn't the same as when that same swimmer was 18. But try to tell that to the 46 year old...or the 76 year old for that matter. Is age the sole proprietor of the etiology of injury? Absolutely not. Is age an excuse for not staying active? If it is, it's a poor one. The pursuit of physical fitness has been shown to have so many benefits such as control of blood sugar, weight control, strength, cardiovascular and flexibility gains plus social and psychological value that to me it almost seems inconceivable that more people do not embrace this past time. In order to maintain the enjoyment of swimming for many years it would be wise to consider a few do's and don'ts with respect to training in order to minimize the risk of injury.

The most common swimming-related injuries are the 'itis' disorders such as tendonitis and bursitis. Masters swimmers range from the late 20's to the much more refined ages where the accumulated flotsam and jetsom of life may have left their mark. I prefer to call them "badges of courage". Old injuries, lack of strength and flexibility are often bit-players in the drama that may develop to become a real world injury. So what's a Masters swimmer to do? Here is a list of a few important dos and don'ts that will hopefully provide a framework

within which you can minimize risk and maximize enjoyment.

Strength training

Strength is important in order to enhance swimming performance but also in the prevention of injury. Muscular strength aids in not only propulsion through the water, but also in the stabilization of joints that must use muscles to produce movement. The term "imbalance" is bandied about in the lay literature all the time and in itself is a bit vague. The shoulder and shoulder girdle is a common source of trouble with swimmers. The muscles involved with shoulder and neck motion are common to both to a large extent and are in many ways interdependent. The muscles of the rotator cuff provide compressive stability to the humeral head of the shoulder. The larger muscles such as trapezius, deltoid and a few others add a shearing stress to the shoulder. The two major players then provide for compressive versus shearing forces, the net result is shoulder movement in whatever plane. Therefore, proper "balance" of these forces is necessary for normal movement. "Imbalance" of these muscular forces will lead to consequences of tissue overload and some sort of "itis".

Flexibility

The jury is still out with respect to flexibility and injury but some flexibility training is a good idea. But just like a fine wine, some is good, too much can be a problem. Flexible, supple muscles and joints just plain work better and most Masters swimmers don't do any or pay this component of fitness lip service at best.

Technique

You can be as flexible and strong as

possible but if your swimming technique is faulty there will be a problem. Masters swimmers are often guilty of pounding up and down the pool doing the same thing over and over. The adage "practise doesn't make perfect, practise makes permanent" is important to remember. "Perfect practise makes perfect" is more important. Continually enhance your mastery over the skill at hand, whether it is a proper flip turn or bubbleless hand entry with freestyle, practise perfectly and don't ever think that you've got it right.

So, develop good strength and flexibility and do so in the right places. Continually refine your technique and recognize the 'Zen' of swimming...you've never really got it right...you're just on the road to perfection. Find someone with a suitable knowledge base to help you with the above who understands swimming. Many Masters teams have members who can contribute to a well-rounded fitness plan to complement the in-pool time. There also are a host of reasonably good publications available that have some good ideas as to strength, flexibility and technical points.

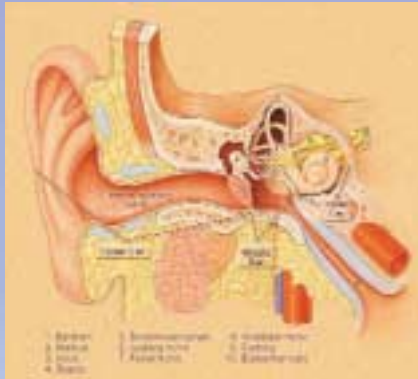
Above all, recognize that the best way to enjoy Masters swimming is to enjoy it for a long, long time...so think of this as an insurance policy or routine maintenance. Just as the responsible car owner doesn't wait for the transmission to fall out before changing the oil, don't wait until you're hurt to consider some injury prevention steps. 🍁

Dr. Erwin is a former CIAU swimming champion with numerous provincial and national medals and records. He is a chiropractor in private practice as well as a research scientist at the University of Toronto where he has completed his PhD in Medical Science where his particular area of interest concerns degenerative disc disease and tissue engineering. He practises in Toronto, Ontario at Osgoode Health Centre.

Ear Problems Amongst Swimmers Prevention and Treatment

By Mark L. Sandilands
President, Masters Swimming Alberta

Swimming is a relatively safe sport, but it's not totally without impact on the body. Aside from shoulder and knee problems, ear problems can plague regular swimmers. An earlier version of this appeared in Waves about three years ago; perhaps it's time to revisit the issue.



Structure of the ear:

The ear canal is ~2.5 cm long (see Figure). The eardrum, in a healthy ear, completely seals the middle ear from the outside. A tiny tube, the Eustachian tube, which has one end in the middle ear and the other in the back of the throat, allows for pressure equalization. This is the main source of another kind of ear infection: middle ear infection. However, "swimmer's ear," or otitis externa, is an infection of the external ear canal. People who swim every day provide ideal conditions for bacteria to grow.

Swimmer's Ear (Otitis Externa)

Healthy skin normally protects against bacteria; however, if skin is irritated by the use of cotton swabs or earplugs, bacteria can grow and cause serious problems. The first experience is usually itching. The infection can progress to swelling and severe pain. Sometimes, if untreated, there is a discharge of pus. More serious infections can result if the condition is ignored.

Treatment

Is pain due to Swimmer's Ear? Or due to a middle ear infection, which leads to different treatment. Consult a physician if pain is severe. He or she will likely prescribe antibiotic drops. The big question next is, "How long do I have to stay out of the water?" Remember that bacteria like moisture. If you only put in the antibiotic drops and keep swimming, you will just wash out the drops, replace them with warm water, and further encourage bacterial growth. There is, however, a way. Once the pain subsides such that you can swim comfortably (three or four days of antibiotic treatment), you could start swimming again provided that you take steps to avoid the conditions that bacteria like.

Prevention

It's said, "Never put anything smaller than your elbow in your ear." Cotton swabs may scratch the skin of the ear canal making it more susceptible to invasion by bacteria or fungi. If you must use cotton swabs, use them to clean out your navel! What else? There are commercial swimmers' eardrops. I make my own. Take a 500 ml bottle of 99% isopropyl alcohol and add 5ml of acetic acid for a 2.5%

solution. (If you can't find glacial acetic acid, use a mixture of 2/3 isopropyl alcohol and 1/3 pickling vinegar.

I keep some of my solution in a 30ml bottle and, after each swim, put about 2 cm of an eyedropper tube in each ear. I let it sit for about 10 seconds, then let it run out onto a tissue. The slight acidity is antibacterial, and the alcohol evaporates readily. That's it. No ear problems. These drops should not be used if you have eczema or other skin conditions in your ear and should never be used if you have perforated eardrums or a tube in your ear. There are many sources of information on the Internet. Try this website for more information: <http://www.sinuscarecenter.com/otextaa.html>



Middle ear infections

Middle ear infections, caused by bacteria entering the Eustachian tube, can be much more serious than swimmer's ear. Flip turns are no help. The best prevention for this is just to wear a nose clip. So, to the cost of swimsuits, caps and goggles, add a nose clip and an occasional bottle of isopropyl alcohol. Swimming is still the best sport!

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Getting to the CORE of swimming!

By Nancy Spence CAT(C)

Improved Core Stability has been a catch phrase in the conditioning of athletes for years but many people still have not gotten the message. A strong core can help you perform better, longer, and with fewer injuries. No matter what your stroke, core stability is essential to good swimming technique.

The body's core is made up of the abdominal and lumbar muscles. The Gluteus Maximus (buttocks or glutes) muscle also plays a key role. By using these muscles, the body creates a fulcrum for both upper and lower body movements. Once this base fatigues or breaks down, the extremities lose their anchor and become less controlled. Less control leads to poor mechanics and a greater chance of overuse injuries, not to mention a lower level of performance.

Swimming freestyle and backstroke involve rolling motions from one side to the other. This motion is initiated in the core. A weak core means less roll and increased stress on the shoulders. During butterfly and breaststroke, a strong core gives both the arm pull and kicking motion a powerful base to initiate motion. If stronger strokes are not enough to get you working your core, think of the power your start will have with strong abdominal/glute muscles initiating your motion and driving you forward. Oh and that streamlining you keep hearing about is held by the core. So a strong core definitely will make you a stronger and more effective swimmer.

Crunches are definitely one way to strengthen your core but do not forget your glutes. Use the following exercises to test your core stability. You can also use them to build up your core strength.

1. Lie on your back, knees bent, feet flat on the ground. Let one leg slowly fall out to the side without moving your pelvis or the other leg. Pay attention and be honest, once it has moved, you have lost core control. Tighten your abdominal muscles to help improve your control but remember to keep breathing.

2. Lie on your back, knees bent, feet flat on the ground. Lift your bottom up and off the ground using only your Gluteus Maximus muscles (buttocks). You only have to lift an inch. Again, be honest!

Are your hamstring muscles (back of thigh) doing the work? Tighten your abdominal muscles as you lift to help improve your control but remember, keep breathing.

3. Lie on your back, knees bent, feet flat on the ground. Place your arms on the floor about 45° from your sides. Slowly drag your arms up above your head. Do not let your arms lift off the floor. Use your abdominal muscles to hold your ribs down and to stop your back from arching but remember to keep breathing. Do not panic, most people struggle to reach shoulder height without cheating in the beginning.

4. Lie on your stomach, chin resting on the floor or your hands, knees bent to 90°, feet together. Let one foot fall slowly out to the side. Keep your pelvis and the other leg still. Pay attention and be honest, once it has moved, you have lost core control. Tighten your abdominal muscles to help improve your control but remember to keep breathing.

5. Lie on your stomach, chin resting on the floor or your hands, knees bent to 90°, feet together. Try to lift one leg up off the floor using only your Gluteus Maximus muscles (buttocks). Again, keep your Hamstrings relaxed and do not brace with the other leg. Tighten your abdominal muscles to help improve your control but remember to keep breathing.

The exercises listed above can help you identify any weakness in your core. You can build up to sets of 10 repeats as you develop your core stability. These exercises are only the beginning. Your certified Athletic Therapist can build a program for your sport or activity. Core Stability exercises are a fun and imaginative part of any exercise program using mat work, stability balls, and resistance training techniques to challenge any fitness level. 🍁

Nancy Spence is Certified Athletic Therapist and has been a masters swimmer since 1998. She is the Co-director of Education for the Ontario Athletic Therapy Association and is currently working towards a Diploma in Osteopathic Treatment from the Canadian College of Osteopathy.

Injury Prevention Through Shoulder Stabilization

By Steve Jorgensen

For the swimmer, the role of cross-training with specific dryland exercises is to develop a level of conditioning that will optimize your practise in the water. A good dryland programme should also help to prevent injury.

Among the possible causes that can give rise to shoulder problems in the swimmer, muscle imbalance and/or insufficiency ranks as one that the individual has at least some ability to change. We can't change that we are getting older, and we can't change the shape of our bony prominences which, around the shoulder joint, may occasionally nip at our tendons. We can change the function of the shoulder region to make it a more efficient partner in our aquatic pursuits.

In a series of three installments, I describe a few general exercises designed to improve the active stabilization of the shoulder girdle (defined as the shoulder blade, collarbone, and upper arm, and the associated muscles). The first article introduces basic isolation exercises, the second will include progressions that integrate movements, and the third will introduce sports specific exercises. For an individually tailored programme, I would encourage you to visit a Physiotherapist. As with all exercise programmes, do not exercise to the point of pain, and begin with basic exercises first.


The Injury Prevention Through Shoulder Stabilization can be found on the Masters Swimming Canada website at www.mastersswimmingcanada.ca

Steve Jorgensen is a Registered Physiotherapist based in Victoria, British Columbia and specializes in Sports and Orthopedic Physiotherapy. For family and professional reasons, he is currently on hiatus from the Victoria Masters Swim Club, though he plans to return to the club in the not-too-distant future. You can reach him at physiost@telus.net with specific questions.

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swimming.about.com

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Former USA Olympic Team Member
www.GoSwim.tv

"Great job. Works like a charm! My daughter thanks you too."
Kim Wrenn
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North Carolina

training partners

By Allan Kary RMT

I have been swimming on and off since I was 9 years old and let's face facts, going up and down the pool 100, 200, or 300 times during a practice is boring. There are ways to make it less boring, such as having a planned workout with some specific goals in mind. I have found however, as undoubtedly most of you have that the best way is to practice with someone who swims at relatively the same speed as you do. I have been fortunate to have two people that fall into this category for me. The first is my wife Helen, however she swims with fins so whenever she beats me I can console myself with the fact that she cheats. The second is my coach Hui Lee. Whenever he beats me there is little consolation in the fact that he is younger than me, my competitive side really makes me dig a little deeper and try a little harder to try to prevent it from happening again.

Hui has been the backbone of the Soo Polar Bears for many years now. By backbone I mean more than just the coach. He has been a constant in the pool. I would take months off at a time and whenever I returned; there was Hui, swimming steady and fast. The Team itself seems to have also grown remarkably over the last 4 or 5 years and that would be largely due to Hui. He encouraged everyone to swim and was always there to praise your accomplishments. He has recruited

more swimmers than anyone I have ever known, and did so because of his love for the sport.

As a training partner Hui was as competitive as anyone but really seemed to care more that you were swimming hard as opposed to who won. I could look into the lane he was in and be encouraged to give it just a little more effort or to try to make just one more repeat in an impossible set. I could see him look at me and try to figure out when I was going to turn it on for the sprint home and he would go just before me. There is bond created between two athletes when they train together like this. You learn to respect each other's abilities and you develop strong friendships, and you take the boredom out of swimming.

On Friday March 26, 2004 at the provincial championships in Etobicoke, Ontario, after having completed the 400 IM and then the 1500 Free, Hui collapsed and died. He was only 39 years old, and a brilliant doctor.

Our club has lost a kind caring coach, and a good friend to everyone. I have also lost one of my training partners and supporters. Hui touched all of our lives in many ways and he will continue to be an inspiration for us all.

Please join us in Sault Ste Marie as we host the Provincial Championships in 2005 in memory of Dr. Hui Lee. 🌸

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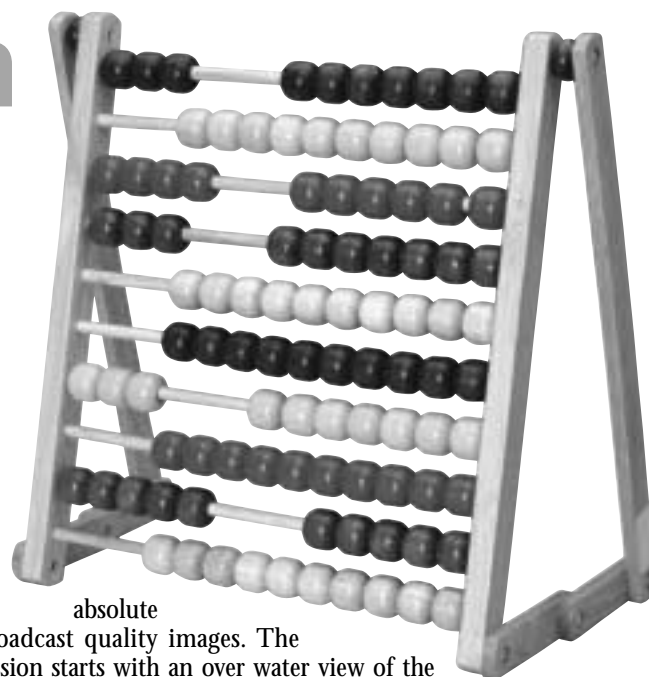
Do you have an analogue coach?

By Greg Sanderson

Like nearly every facet of life today the swimming world is quiet literally being revolutionized by high tech. Gone are the days where a coach or athlete simply makes generalized assumptions about what an athlete is or should be doing based on glimpses of the stroke from the pool deck. A proactive coach from the 'analogue' era may have jumped into the pool with a pair of goggles or have their swimmers quickly paddle by a tiny underwater window in a little 10 meter long diver tank to make some corrective assessments. Even once these diminutive comments were made even the most clever swim veteran would have difficulty making the cognitive connection necessary to compose anything more than the most minuscule incremental change, if any actualized change at all.

Today coaches, from the most sophisticated to the most novice, are able to gaze at their athletes in the most comprehensive manner by using the Team Aquatic Supplies RaceTek underwater analysis system. The RaceTek system is biomechanical analysis system that digitally records a swimmers every intricate movement onto DVD. Once the swimmer has been recorded the professional staff from Team Aquatics do a complete analysis of the swim. So powerful is this tool that the RaceTek system is used weekly at the National Swim Center at UBC, it is also used on nearly every national swimming team event that is logistically possible. In the tech age the coach and his athletes have the ability to make real, actualized correction through the biofeedback methodologies offered by the RaceTek system.

The RaceTek system is not the pole camera that many coaches have been using, or attempting to use up to this point. The RaceTek system is a highly refined assembly of underwater digital recoding and analyzing instruments. The aforementioned pole cam is the modern day "dive tank window", in that it only allows for a swift glimpse of the swimmers as they quickly paddle by, is extremely low quality, and has no method for further swimmer viewing. The RaceTek outfit has been put together with only the highest end equipment allowing for



absolute broadcast quality images. The session starts with an over water view of the swimmers start, as the swimmers hips enter the water we instantly switch to a side underwater view of the swim. As the athlete swims down the length we follow by his/her side recording every movement through the turn, and back down the length. With 10 meters left in the second length we switch to a front view to catch the athlete swimming into the camera. Notice, the RaceTek components have been deliberately assembled together to capture a holistic viewing of the athlete.

Ryan Laurin, former national team member, and Canadian record holder does the Biomechanical analysis of the athletes swim. With the multiple camera angle footage that has been digitally recorded, Ryan is able to look at every intricacy that is displayed in a swimmers stroke; he not only makes voice over comments onto the DVD, he also has a telestrator and draws onto the playing image the corrective illustrations. The athlete receives in DVD format a real time video of his/her swim, a frame by frame analyzed version of their swim, and also the corrective comments and illustrations that provide for an invaluable biofeedback tool necessary to make conspicuous improvement.

Recently the RaceTek crew was at the Watermania doing a film session set up by masters sprint extraordinaire Greg Margeritas. Booking is very simple: get a group together; generally we need a group of 6 or more athletes. In this case Greg sent out an email to his network of swim friends and brought together 9 athletes from the lower mainland and the island. From this point we set up a date, time, and location to do the swim, this case we used Watermania in Richmond, between heats and finals of a swim meet.

We met on pool deck at about 2.15, while the RaceTek crew set up the swimmers did a small warm-up of about 15 minutes. With the warm up over and the equipment set up we do a brief explanation of what the protocol is, and begin.

The protocol is very simple, 3x50 build, and descending, with about 20-30 seconds rest. Our first swimmer hit the water at about 2.30 and we were wheels up and everyone on their way by about 3.30 or so. From this point Ryan will take the master copies of the swim videos and do the analysis back at his office. The analysis itself generally takes 1-2 days and the DVDs are mailed directly to the swimmer for their viewing pleasure. 🌿

If yourself or anyone you know would like to experience the most technologically advanced swimming tool available today or if you have any questions please do not hesitate to give Ryan at Team Aquatic Supplies a call today directly at 604.809.7946.

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MSC News and Notices

Minimum Age Change

Effective March 15, 2004, the minimum age for competing at the Canadian Championships and for having times count for Canadian Records and Rankings has been lowered to 18. The youngest age group is expanded to 18-24. All swimmers must be registered with their Provincial Masters Organization, some of which have an older age requirement. We welcome these younger adults to their first Canadian Championship.

Who is Eugene Lehman?

Due to technical difficulties, we were unable to include Eugene Lehman's biography in the Issue 1, Volume 11 of *Waves*. This had many people asking "who is Eugene Lehman and what is he doing on the cover of *Waves*?" Eugene's biography, below, will explain who is, and why he was more than qualified to be on the cover of our "Inspiration Edition".

Eugene Lehman was born in New York City on January, 26 1913 and grew up in Tarrytown, NY where his father was founder and director of a private boarding school for girls, Highland Manor. In the summer his father was director of a private summer camp for girls at S Naples ME on Lake Sebago. "I think he had me swimming from six months of age or so, but I never swam competitively. Even when I went to Yale, I never thought of competitive swimming--just for physical fitness," remarks Eugene.

After attending Yale in 1933, he got his Masters in Child Development at Columbia in 1937 and taught in the grades. "Apparently the US military thought if I could predict what kids would do I could also predict the weather so they sent me to meteorology school at University of Chicago in 1943," Eugene recalls. He spent WWII in the US Army Air Corps as a weather forecaster, in Norman Wells NW, Base Borinque.

On January 29, 1997, Eugene underwent open heart surgery and had a Medtronic porcine aortic valve installed by Dr. Patrick Ergina. Eugene is still competing (and setting Provincial, National and World records) with the same valve.

Eugene trains daily in the pool or in the weight room with his wife, Shirley and is a member of the Point Claire Masters (Quebec).

www.mastersswimmingcanada.ca

Masters Swimming Canada has a new domain name, www.mastersswimmingcanada.ca. Over time we would like the website to become a valued source of information for our members. There are three sections that, with your contributions, we would like to improve. MSC News is a section for any national level news or special events. Tributes is a section where you can let us know about special people in your club or province. Have there been significant accomplishments you think others would like to know about? Comments contains views and opinions of members on issues of interest to Masters swimmers. Are there activities or situations in MSC that you support or suggest changes to? You can already use the site for links to nationals, provincial associations, clubs, records and top 20's, coaching and fitness articles, and meets. Check our the site for By-Laws, meeting minutes, board and committee composition, rules, procedures and guidelines, discipline policy, financial statements, current and past issues of *Waves* and more. Email your comments and suggestions to David Ellis at webmaster@mastersswimmingcanada.ca

Member Address Changes

Please notify your club registrar if you have changed your address. Ask your coach how to reach your club registrar. Address changes are not to be sent to the National Office or the Editor. Masters Swimming Canada, the Masters Provincial representatives and the Quebec Swimming Federation are not responsible if your address is not updated.

Language Preference

You can receive *Waves/La Vague* in English or French. Contact your club or Provincial registrar to let them know if you would like to receive *Waves/La Vague* in different language. Do not send your request to the National Office or the Editor.

MSC Order Form Now Online

The MSC order form for pins, rule books, records, past and current issues of *Waves*, and coaching resources can be found at www.mastersswimmingcanada.ca

President's Message

By Chris Smith

As many of you know, Sue Schmidt resigned as MSC President at the beginning of the year, I would like to thank her, on behalf of all of us, for her service to our sport. At a MSC Board meeting on February 1, I was confirmed President, Lee-Anne Greer from PEI became Vice-President while Luc Hurtubise (QC) and Mark Sandilands (AB) remain as Treasurer and Secretary. Sue will continue on the Board as Past President and as chair of the Publications and Communications Committee. John Bell is the new representative on the Board from B.C.. We thank Aart Looye for his years of service.

I would also like to thank, on behalf of the Board and our membership, all those who have contributed so much to our sport over the last year. There are many across the country who organize, coach and run our clubs, the basic building block of our sport. There are those who run meets, officiate, sit on committees and boards at the provincial and national levels, there are those at every level who contribute to our communication with our members. Special thanks, again to Luc Hurtubise, Carole Thomas, Nicole Normandin and all the other great folks in Montreal for the 2003 Championship. A special thanks to the Rules Committee, Dale Beck, Pat Niblett, Marj Walton and chaired by Michael Stroud for bringing our rules up to date.

By the time you receive this we will be through most of the Provincial Championships and looking forward to the Canadian Championship in Edmonton, we hope to see many of you there. The 2005 Championship is planned for Toronto on the May long weekend.

We recognize that there are now many opportunities for growth and improvements, also challenges for our sport. A strong national body is needed to deal with these at the national and international level. We are a Board of ten, we are MSC's voting members, we each have to deal with both regional and national, and international concerns. Our relationship, our ability to communicate with our 8500 members, our 250 clubs, is difficult. We are clearing up some old distractions, we have moved to rationalize our rules, our strategic plan and our structure so that we can involve more of you in the decision making and the work needed to build MSC into a truly strong adult swim fitness organization across this country. We welcome your participation in this.

Diving Ahead Upcoming Swim Meets

Canadian Championships

May 21-24 2004

Edmonton (Alberta)

www.members.shaw.ca/nationals

World Championships

June 3-10 2004

Riccione (Italy)

www.masters2004.it

USMS Long Course

Du 12 au 15 août 2004

Savannah (Georgia)

www.savannahmasters.com

Canadian Championships

May 20-23 2005

Toronto (Ontario)

www.mastersswimmingontario.ca

World Masters Games

July 22-31 2005

Edmonton (Alberta)

www.2005worldmasters.com

Championship of the Americas

October 10-15 2005

Sao Paulo (Brazil)

www.latycar.org

Open Water Races

June 27 2004

Saint-Malo Multisports

(750 m ou 1 500 m)

Lac Saint-Malo (Manitoba)

www.triathlon.mb.ca

July 24 2004

Brights Grove Open Water Swim

(1,5 km et 3 km)

Lac Huron (Ontario)

www.mastersswimmingontario.ca

July 10 2004

Technosport Open Water (3 km)

Lac Meech (Ontario)

www.mastersswimmingontario.ca

August 14 2004

Technosport Open Water (4 km)

Lac Meech (Ontario)

www.mastersswimmingontario.ca

June 28 2004

Festival eau libre de Montréal

Bassin olympique de l'Île Notre-Dame

www.fnq.qc.ca

July 30 2004

Marathon de la relève Alcan

(10 km) et de la Coupe du Québec

eau libre (10 km)

Lac Saint-Jean, Roberval (Québec)

Éric Juneau, (418) 275-2851

www.fnq.qc.ca

July 31 2004

Invitation eau libre (1 km et 2 km)

et Marathon de la Coupe du

Québec (5 km)

Lac Saint-Jean, Roberval (Québec)

Éric Juneau, (418) 275-2851

www.fnq.qc.ca

July 31 2004

Marathon Coupe du monde FINA

(32 km)

Lac Saint-Jean, Roberval (Québec)

Éric Juneau (418) 275-2851

www.fnq.qc.ca

July 31 2004

Marathon international (40 km)

Lac Memphrémagog, Magog

(Québec)

Catherine Wilhelmy, (819) 843-4417

www.fnq.qc.ca

August 7 2004

Invitation eau libre (1 km, 2 km et

5 km)

Lac Memphrémagog, Magog

(Québec)

Catherine Wilhelmy, (819) 843-4417

www.fnq.qc.ca

August 7 2004

Marathon de la Coupe du Québec

eau libre (5 km et 10 km)

Lac Memphrémagog, Magog

(Québec)

Catherine Wilhelmy, (819) 843-4417

www.fnq.qc.ca

August 8 2004

Traversée du lac des Sables eau

libre (1 km, 2 km et 5 km) et

Marathon Coupe du Québec eau

libre (5 km)

Lac des Sables, Sainte-Agathe

(Québec)

Louis Turcotte, (450) 227-3578

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Promote your swim meet in Diving Ahead. Email your information to the Editor at pinarski@mts.net by August 8, 2004 to be included in the fall 2004 edition of Waves

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