Boston Triathlon Training Plan Supplement

For Team BMC

By Coach Karen Smyers

SUPPLEMENT CONTENTS

WELCOME!

Welcome to Boston Medical Center's Boston Triathlon training program. The following 10-week training plan has been developed to help you prepare for and complete the Boston Triathlon on September 3rd. This program provides a schedule of workouts to help you balance the training required for three sports (swimming, biking and running) at the same time. In addition, it will train you to be able to do these three sports consecutively! The race consists of a half-mile swim in the Boston Harbor, followed by a 12-mile bike through the streets of Boston and along Memorial Drive, and finishes with a 3-mile flat run through the South Boston waterfront area.

Two workout schedules are included: one for beginners and one for advanced. The beginner schedule assumes that you are starting without much or any training in any of the three sports. If you can commit about 3-4 hours per week to training and you systematically follow the schedule, you will be able to complete a sprint triathlon by the end of the ten weeks. The advanced schedule is for those athletes that already have some background in swimming, biking and running and wish to focus on getting faster at each discipline.

Each individual may begin the program with varying strengths and weaknesses. Some adjustment in distances may be necessary if you are already proficient in one of the three sports. You probably don't need to decrease your training in any of the sports to stick to the schedule (unless you need the time or energy to be able to add in the other two sports). A proficient runner may even want to combine the run training from the advanced program with the swim and bike schedule from the beginner's program.

There is a lot of information to absorb in this packet, but we recognize that you may still have questions that you would like to address to a real, live coach. Coach Karen Smyers (a 23-year veteran of the sport and the 1995 Hawaiian Ironman Champion) will be available for questions and advice via email at MKandKS@comast.net. In addition, Coach Karen will be hosting two clinics in the upcoming weeks to give you some hands-on coaching and practice. These will be valuable opportunities to work on your technique, learn about transitions and get more comfortable with open water swimming.

We wish you good health and good spirits as you embark on this great challenge!

Heart Rate Based Training

It is important that you know the proper intensity levels for different workouts. We use two ways to describe an intensity level. The first method bases the intensity on each individual's heart rate (HR) zones. This method is the most precise and reliable method but it requires you to own and use your HR monitor and it requires you to have done a ramp test to determine your lactate threshold (LT) and the corresponding zones correctly. (The oft-published method of using a formula of 220-your age is unreliable and is not recommended.) The second method we use is perceived exertion. This is less precise but can be used in the absence of the heart rate method.

The following heart rate zones are used for describing workout intensity. If you haven't been tested to determine your individual zones, go by the accompanying perceived exertion description.

Zone	Training Type	HR Range	Perceived Exertion
E1	Easy Aerobic/Base/Recovery	25-40 below LT	Easy (3-4)
E2	Aerobic Training	15-24 below LT	Moderate (5-6)
E3	Tempo Training	4-14 below LT	Somewhat hard (7-8)
E4	Lactate Threshold Training	LT +/- 3	Hard (8-9)
E5	Supra Threshold Training	LT+3 to Max HR	All Out (10)

Keep in mind what the goals of your training are:

- Develop your aerobic system to be able to complete the race distance in all three sports
- Build strength in order to withstand the rigors of swimming, biking and running
- Improve technique in order to swim, bike, and run with efficiency
- Determine and become comfortable with pacing and HR zones in each sport
- Learn to transition from one sport to another
- Become adept at using the gear required during a triathlon
- Extend the time that you are able to hold a given HR or pace
- Develop confidence and mental toughness necessary to ensure you reach the finish line.

The Schedule

Although the beginner program doesn't require you to have been actively training in any of the sports, it does assume that you are capable of doing all three sports—if you need to learn to swim, for example, it is beyond the scope of this program. Take some swim lessons for a season from a swim instructor, and then you can embark on this training program.

This schedule has been developed with the time constraints of a working person in mind. You can do some of the initial bike workouts in a spin class or on a bike ergometer at a health club, but it is important to get at least some experience biking outdoors on the bike you will use in the race so you get used to balancing, shifting, and getting on and off your bike with ease. It is fine to do some of your run training on a treadmill if you prefer. For swimming, if you are not a member of a health club with a pool, you may be able to find pool time at a local Y or high school. Walden Pond in Concord is a popular spot for open water practice.

In addition to the scheduled workouts in swimming, biking, and running, there is a list of strength exercises that would be very beneficial as a supplemental workout. Doing these exercises 2-3 times/week will add 1-1.5 hours to your weekly training time.

Finally, before embarking on the rigors of any training program, you should have an OK from your physician.

Workout Notes

The schedule generally calls for just one workout per day. If you have to miss a day for some reason or if you really want to have one day off every week, it is fine to double up sometimes and do two workouts in a day if you can fit them in. It is also fine to shuffle around the workouts to fit your particular schedule (if you have access to a pool on Tuesday and Thursday rather than Monday and Friday for example). However, since you are only doing 2-3 workouts per week in each sport, it is best if they are spread out throughout the week rather than lumped together. Even though you are training every day, having a day off from the specific sport gives you valuable recovery time.

You will find that cross-training (training for more than one sport at a time) is a marvelous way to build fitness without the overuse injuries and burnout that you may get from just training in a single sport. Enjoy the training!

Getting Through Your First Triathlon Swim

The swim portion of a triathlon tends to be the segment that gives first-timers the most anxiety. There is a good reason--on the bike ride, you can coast when you are tired, on the run leg, you can walk if you need a break, but on the swim if you are tired, your options seem rather limited....the phrase "sink or swim" comes to mind.

But that is a misleading perception that adds to people's anxieties about the swim segment. Did you know that it is perfectly legal to hold on to a boat or surfboard to catch your breath as long as you are not making progress? You can also float, tread water, bob, or even stand up--if you are fortunate enough to be in shallow water. If your first race is in a pool, you have even more options.

The swim course in Boston will be lined with volunteers in kayaks or on surfboards just in case someone needs help during the swim. All you need to do is wave your arm to signal that you need assistance. Once people realize that if they get into trouble, there is a fallback position, it eases their minds considerably.

Ironically, it is anxiety itself that contributes to the difficulty of the swim. Two keys to good swimming are being relaxed in the water and having controlled breathing. Anxiety usually has the opposite effect on both. Thus if you can lessen your anxiety by being prepared, your swimming will improve.

Here are some tips to help you with your preparation.

Prepare The first step in being prepared is working up to the distance you must swim in the race in your training. It is even better if you can do it in the open-water to mimic race conditions. The more physically prepared you are, the less anxiety you should feel. On race day, keep reminding yourself of the training you have done.

Know the Course Take the time to check out the layout of the buoys on race morning. Don't be surprised if what looked like a perfect triangle on the course map looks more like a giant amoeba from shore. Try to find some landmarks on shore that you may need to aim for to keep you oriented. If you find yourself getting disoriented on the swim, it is best to stop swimming and reorient yourself. There is nothing worse than swimming a few hundred yards in the wrong direction. The Boston Triathlon course is pretty simple: you swim around the pier that the World Trade Center is built on. You are always quite close to the pier and the course only requires two left hand turns.

See Clearly Make sure you have a pair of goggles that fit you and are appropriate for the day. At shortly after sunrise when most races start, the sun can be right above the water causing a glare that makes visibility tricky. A smoke-tinted lens will help cut the glare. Conversely, if it is overcast, the smoke-tinted lens may shroud you in darkness. Have a clear or orange-tinted lens available for those conditions.

Your goggle fit is important too. If your goggles give you a headache or leave lines on your face for several hours after use, they are too tight. If they keep leaking, try tightening the straps or adjusting the nosepiece. If adjustments don't make them comfortable and leak-proof, try a different model that may fit your face better.

To keep goggles from fogging, put a little saliva (i.e. spit!) into your dry goggles, slosh it around and then rinse lightly in the water before putting them on.

Seed Yourself The start of the swim can set the tone for your whole race. If you are one of the better swimmers, by all means start near the front of your group. You don't want to swim through or over slower people anymore than they want you swimming over them. If you are a slower swimmer or one who is more concerned with finishing without water up your nose than what your time is, then start near the back of your wave or off to the side where there is less congestion.

Stay Cool Be prepared for "incidental contact" with other swimmers. Keep in mind that no one is going out of his or her way to clobber you--they are trying to find clear water just as desperately as you are. If you get in a situation in which one swimmer keeps bumping or hitting you, give them a wedgie. Just kidding, stop and let them go by and continue your swim in more peaceful surroundings. (But make sure you re-pass them on the bike.)

Calm Yourself If you do begin to panic, have a plan to calm yourself. Focus on breathing in and out slowly and deeply. Tread water or hold on to something until you are breathing calmly and regularly again. . Often keeping your head above water for a few strokes will help this. Try to envision how you swim in training and imagine you are there. Just take it a few strokes at a time if that is what it takes—the important thing is to get to the finish.

Cycling Safety Tips

- Always wear your properly-fitted helmet whenever you are on your bike.
- Make sure your tires are inflated (they should be hard to depress with your thumb)
- Be prepared to change a flat: carry a bike pump or C02 cartridge, spare tube and patch kit, and tire irons.
- If you aren't prepared to change a flat, be sure to carry a cell phone and cab fare!
- Have a water bottle cage to carry a water bottle with you.
- Ride defensively: assume that cars don't see you until you see them acknowledge you.
- Follow the rules of the road and use hands signals to show your intentions in advance.
- Carry some ID and some emergency money.
- Cycling gloves and sunglasses can protect your hands and eyes and add comfort.
- Avoid puddles that you can't see the bottom of—they often are potholes filled with water.
- Make sure your hands are in a good position to brake when approaching intersections or dangerous situations.
- Ride single file if there is traffic on the road.
- When braking, practice feathering your brakes slowly (usually front then back) to avoid skidding or flipping over your handlebars.
- When turning a corner when the bike has momentum, learn to lean your bike into the turn rather than turning your handlebars.
- Practice your bike handling on quiet roads before venturing into busy areas or a race.

Swimming Drills and Visualization

Drills are an effective means of improving your swim stroke; the best time of year to work on your stroke is in the pre-season before bad habits are engrained. By breaking down the stroke into its parts, you can concentrate on one thing at a time. Repetition of correct segments of your stroke is key to incorporating correct technique into your whole stroke. When the program calls for "drills" choose a variety of the following. Pay attention to which you need work on and which ones seem to improve your stroke the most and do these more often. Think about good stroke technique every time you swim!

Swimming Visualization There are many good visualization tricks that can help your technique. Here are a few of the most helpful.

Strong Core, Relaxed Limbs When swimming, it is important to stay as relaxed as possible even as you power your way through the water. Maintaining a strong core—elongated spine, pelvis slightly tucked under with no bends or breaks in your line as you roll side-to-side, is key. At the same time, try to keep your arms feeling almost weightless particularly during the recovery and initial pull phase of the stroke. Repeat and concentrate on the mantra, "Strong center, relaxed arms" as you swim.

Body on a Skewer To correctly keep your body in alignment as you rotate from side to side while you swim, imagine that your body is on a skewer that goes straight through the top of your head and out between your legs. The skewer should always go straight down the lane while your body rotates back and forth on the skewer as your roll from side to side. The skewer should not go up and down or deviate from side to side as you move down the lane.

Swim Through a Tube Imagine that you are swimming through a narrow tube (but high enough to allow for a relaxed arm recovery). You must avoid hitting the sides of the tube by keeping your kick narrow but fast and by holding a very straight line.

Reach Over the Barrel It can be helpful to keep your elbow high at the initial pull phase of your stroke if you imagine you are reaching over a barrel and pulling the barrel under your body and then throwing it behind you. Keeping your elbow high will ensure that you maximize the surface area of your arm that is pushing water backward (which will send your body forward!).

Stroke Drills

Kick with Arms at Sides This is a good drill to improve your balance in the water. Kick a lap with both arms at your sides. To breathe, roll slowly to one side while maintaining your balance and being careful to keep the side of your face in the water as you breathe. Note how excessive head movement (looking at the ceiling) will make you sink. Also note that after you exhale, you begin to sink, so it is important to have a quick exchange of air and to inflate your lungs fully to keep your body high in the water. Pressing your fully inflated chest down into the water will help raise your legs higher to the surface as will a strong kick. Be sure to practice breathing to both sides.

Kick with One Arm Extended Kick a lap on your side with the bottom arm extended fully in front of you and the other arm at your side. Keep your kick fast and tight. To maintain better momentum, you can kick for a few seconds on one side before pulling through with the bottom arm and rolling to the other side for a few seconds of kicking. Work on your balance on your side, keeping your cheek laying in the water while you breathe, and your chest pressed down to keep your legs and hips high in the water.

Fist Drill Swim regular crawl stroke but keep your hands in fists with your thumbs tucked inside your fingers. You should be extra sensitized to the feeling of the water against your forearms with your palms out of the equation. You will also notice that you can't use your hands for little balance corrections so you must pay attention to your core for balance in the water. Focus on keeping your elbows high above your fists through the pull phase just like you are reaching over the barrel.

One-Arm Swimming—Arm Extended Swim a lap with one arm only while the other arm stays extended out in front. Pay particular attention to pushing your stroking hand all the way past your hip as you roll to the side. Finish the stroke with both arms extended out in front. Repeat using the other arm.

One-Arm Swimming--Arm at Side Swim a lap with one arm only while the other arm stays at your side. This is harder than the other one-arm swimming drill because you can't use your outstreched arm for balance. It can be helpful to start this drill on your side with one-arm outstretched. Then do a full stroke with this arm only as you roll to the opposite side, take a breath, and return to the original side with arm outstretched. As you get better, you will not need to hesitate between strokes. Keeping a strong core and good balance is key to performing this drill without drowning! Repeat using the other arm.

Vertical Kicking Substitute 1-minute of vertical kicking in deep water for 50-yards of drills. To do this, stay vertical in the water while doing the flutter kick. (Avoid doing long slow kicks like you would tread water—do short, fast kicks that come from the hip.) Try to hold your hands out of the water for short periods of time, using only your kick to keep your head above water. (Nothing like the fear of drowning to whip that kick into shape!) Eventually you should be able to kick with hands out for the full minute.

Cycling Drills and Visualization

There is much more technique to cycling than most people realize. By consistently doing drills and visualization techniques at the beginning of the season, you can greatly improve the efficiency and power of your pedal stroke. When you are on an indoor trainer, you can even close your eyes to enhance the sensations you are concentrating on. Here are some of the visualization techniques that can be helpful.

Pedal in Small Circles When pedaling at a high cadence (100 rpms and above), imagine that you are trying to hone in on the center of your pedaling circle (the bottom bracket) with the ball of your foot. Focus on bringing every bit of the circumference of the circle in tight to the center. You will notice that your cadence will pick up as you do this. Focus on staying as relaxed as possible as you pedal.

Pedal in Large Circles When pedaling at a low cadence (85 rpms and below), imagine that you are trying to expand the circumference of the crank arm by pushing out away from the center of your crank around the entire circle. Try to keep an even speed around the whole pedal stroke (don't accelerate on the down-stroke, for example).

Scrape the Dog-Doo Off your Shoe To prevent "bottoming out" and to ease the transition from the down-stroke to the upstroke, imagine you are scraping something (dog-doo is a realistic culprit) from the bottom of your shoe. This image should help you have a nice arc at the bottom of the pedal stroke and will help you to drop your heel low enough to engage your gluteal muscles and hamstrings on the upstroke.

Stay Light in Your Shoes To enhance your neuromuscular quickness, imagine that your feet just touch the bottom of the shoe lightly on each pedal stroke. This will help you to concentrate more on the other 270 degrees of the pedal stroke.

Cycling Drills

One-Leg Drills (Practice this on a stationary bike at first.) Unclip one foot from your pedal and pedal for 30 seconds with the other foot. Try to maintain the momentum and keep an even speed around the circle. You can balance your unused foot on the trainer carefully to help a little with balance. You may find that you have a "catch" at the top of the pedal stroke as you get tired. Try to avoid this catch by firing your hip flexor and keeping pressure against the crank through the whole circle. You will get better as you practice this drill. Clip back in with both feet and pedal for 15 seconds with both legs before unclipping the other foot and repeating the drill with the other leg. Work up to 3 sets of 45 seconds on each leg by adding 15 seconds or adding a set as you get better at it.

Clock-Face Drills Focus on different parts of your pedal stroke by dividing the pedaling circle up into segments that correspond to the face of a clock with 12 o'clock denoting the crank at the highest point and 6 o'clock denoting the crank at the lowest point of the stroke. The top of the stroke is from 11 o-clock to 1 o-clock. The downstroke occurs from 1 o'clock to 5 o-clock (most people already focus too much on this segment of the pedal stroke). From 5 o'clock to 7 o'clock is the bottom of the stroke (the transition from downstroke to upstroke). From 7 o'clock to 11 o'clock is the upstroke. Spend one minute focusing on each individual segment of the pedal stroke (on both legs at the same time).

Running Drills and Visualization

You can work on your running form just as you can improve technique in swimming and cycling. Form drills are focused on making you a more efficient runner with less wasted motion. A common form mistake is over-striding: letting your foot strike the ground when it is ahead of your body. When you over-stride:

- you land heel first with your foot in front of your body which makes it harder to absorb impact.
- you are forced into a slower turnover (stride rate) which means you need more power per stride to go the same pace.
- you lose momentum with each stride as the foot must stay on the ground a long time while the body passes over the foot.

To avoid over-striding, you want to keep your cadence (or stride-rate) high. Keep your foot-strike directly under your body, the ideal place to absorb impact. You should land on your mid-foot first, before your heel hits the ground as your "springs" compress. From this position, your foot can push off more quickly which helps maintain momentum between strides.

Here is some effective visualization you can use to help improve your form while you run.

Sternum on a String Envision that you are being pulled forward by a string that is attached to your sternum. This will keep your posture upright (you don't want to be hunched forward with your shoulders) and will help you concentrate on forward propulsion rather than up and down motion.

Arms Like Pendulums Imagine that your arms are pendulums that hang from your shoulders. Remind yourself to feel the weight of your arms dropping down from your shoulders to relieve the tendency to hunch your shoulders and create unnecessary upper body tension.

Feet and Legs are Springs Try to feel as though your legs are tightly coiled springs—when you land, there is a quick absorption of impact and then a corresponding burst of energy released as your foot kicks back off the ground behind you. Don't let the ground absorb any of your energy by letting your body collapse upon impact.

Running Drills

Count your Foot Strikes A good stride rate to shoot for is close to 90 right (or left) foot strikes per minute. You can count them yourself during your run. If you are in the low 80's, see if you can gradually work on shorter strides with a faster turnover by not reaching out so far with your foot in front of your body.

Scamper Downhill A common mistake on down hills is for runners to lean back and try

to "control" the descent by braking with their quad muscles. This eccentric muscle contraction is very hard on the legs and is counter-productive because it slows you down. Instead, learn to use the down hills to your advantage. Lean slightly forward so that your body stays perpendicular with the hill. Allow your turnover to increase slightly as you pick up speed--let gravity take you down the hill! Keep your feet under your body as best as you can--try not to "brake" your momentum by over-striding. Scamper down the hill rather than plod!

Uphill Running What goes down often started by going up first. Here are some tips for getting up the hill in the most efficient manner. Shorter, choppier strides will help you keep your momentum better than longer, slower strides. Use your arms to "drive" your legs: keep your arms relaxed but put a little more "oomph" into the forward and backward arm swing and you will see that it can give you a little more "oomph" in your legs. Keep your heart rate and breathing under control so you can sustain your pace over the top of the hill. Don't focus too much on the top of the hill: glance up occasionally to see how much you have to go, but keep your gaze focused mostly on the 15-yards directly ahead of you. Take it small portions at a time and it won't overwhelm you.

Run Fast to Run Fast Include some short segments of faster running at least once per week to teach your legs a faster turnover and quicker, more powerful push-off. These are commonly called “strides” or “accelerations”. Gradually accelerate to a controlled sprint pace and hold this pace and your form for about 15-20 seconds. Decelerate and walk or jog until fully recovered before starting your next one. Repeat 3-5 times.

Speedy Transitions

With all the focus on improving swim, bike, and run times, we sometimes forget that the clock is still running between events. A minute saved in transition is equal to a minute off of your run split. It takes a lot less energy to save time in T1 and T2. All it takes is a little practice and some advance planning—and some willingness to endure a little discomfort.

There is often a trade-off between speed and comfort when it comes to your transition. For example, if you want to wear socks for the bike or run, you have to spend the time to put them on—if you can learn to do without them, you may have a small blister here and there but your feet will toughen up eventually. You can put on as many clothes as you like after the swim, but they all take time. The fastest transition requires no changing of clothes. In your first race, you may want to lean toward comfort. As you start to pay more attention to your times, you may start paring down to the "bare" necessities (so to speak!).

Here are some other things you can do to improve your transition time.

- Do as many things as you can before the race starts. For example, make sure your helmet is unclipped and laying open in the easiest position to place it on your head and buckle it. Have your bike shoes open and un-velcro-ed. If you have clothes to put on, lay them out in reverse order of what you need to put on—i.e. put the first thing on the top of the pile. Make sure the order is logical—don't put your helmet on before your shirt, for example!
- Practice getting your wetsuit off if you plan to wear one.
- Make sure your bike is in a gear that is proper for the first part of the race. Nothing gets you off to a worst start than falling over on the uphill out of transition! The Boston Triathlon starts out on a flat road.
- Know where your bike is racked both from the finish chute of the swim and the finish chute of the bike. In both cases you need to know what rack to run to and it can be confusing when you come from a different angle or direction.
- Make sure you know the ins and outs of the transition area. Nothing wastes time more than running in the wrong direction when you are trying to exit to start the bike or run.
- Know the mount and dismount lines: in most races, there will be a line outside the transition area which marks where it is safe to get on your bike—you must walk or run your bike over this line before you can mount. There may be a separate dismount line which indicates where you must dismount before walking or running your bike back into the transition area. Usually there is no riding your bike in the transition area for safety reasons.
- Invest in some elastic laces or lace locks for your running shoes. For a few dollars you can save a good 30 seconds of time—that is a pretty good investment.
- Practice getting on and off your bike in a reliable way. It is very easy to get discombobulated when you are starting or finishing the bike. If you have a reliable way to mount and dismount, it is one less thing you need to think about.

Strength Routine

It is important to include exercises to enhance your strength to supplement your fitness and keep you from getting hurt during training. Because it is hard for most triathletes to make a special trip to the gym for this purpose, we have outlined a set of exercises that can be done at home with no other equipment than some hand weights and a balance ball. The exercises target your core and groups of muscles in a way that is beneficial for triathletes. The strength routine alternates (roughly) between core, lower, and upper body exercises if you do them in the order outlined. You do not need to do all these exercises each session. Attempt to do 10 exercises per session with a good mix of upper, lower, and core exercises. Start with two sessions per week for three weeks, then aim for three sessions per week for the duration of the program. If you stay focused, you can complete the strength routine in just 20-25 minutes.

Plank: Hold your body in a pushup position, except that your forearms are on the floor supporting your body weight (elbows under your shoulders and forearms are parallel to each other). Make sure your body is aligned from toe to shoulder--no sagging butt or arched back.
Hold position for up to 3 sets of 1-minute.

Walking lunges: Take a big step with right leg and drop left knee slowly to the ground while keeping upright posture with torso. Don't let your right knee go beyond the plane of your right toes. Alternate right and left as you walk across the floor.
Do 3 sets of 10/steps per leg. Add hand-weights as you get stronger.

Walking pushups: Do a regular pushup, then in the up position, " walk" three arm steps to the left keeping torso rigid and tight. Do another pushup--walk 3 arm steps back. Repeat.
Work up to 3 sets of 10 push-ups.

Crunches on BB: (BB=balance ball) Lie with your back on the balance ball, hands clasped behind your head and your feet on the ground about shoulder width apart. Do a crunch by trying to bring your ribs to your hips without moving any other body part (especially neck or elbows!). Go back to starting position. Now try to bring your right bottom rib to your left hipbone. Go back to starting position. Now try to bring your left bottom rib to your right hipbone. Repeat.
Work up to 3 sets of 50 crunches.

Butt pushups: Lie on back with one leg bent so your heel is next to your butt, the other leg straight out. Push your hips up through the heel of the bent leg so that your body forms a straight line from neck to the toe of the straight leg. Knees should be together. Hold the position for a second before dropping your butt slowly back to the floor. Do 10-15 repeats on one leg before switching to the other leg.
Work up to 3 sets of 15.

Prone rows on BB: Lie with chest on balance ball. Using hand weights in both hands, bring elbows upward as if you were doing a rowing motion. Squeeze your shoulder blades together at the top of motion.
Work up to 3 sets of 15, add weight as you get stronger.

Elbow roll on BB: Kneel on floor with BB in front of you and wrists resting on ball. Now roll the ball away from you as the ball rolls up your forearm--you will be supporting your torso with your abdominal muscles as the distance between your knees and the contact point with the ball grows. When you can't roll out any farther, roll slowly back to starting position. Experiment with different starting points to get the maximum abdominal workout.
Work up to 3 sets of 20.

Squats w/ BB: Stand with the ball between your back and a flat wall. Do a squat where you bend your knees to a right angle so your thighs are parallel with the floor. Lean slightly back into the ball so that your knees don't extend over your toes when you do the squat. Once you have the hang of this with both legs, switch to one-leg squats.
Work up to 3 sets of 15/leg. Add hand weights as you progress.

Prone fly's on BB: Lie with chest on Balance Ball and hands on either side of the ball. Using hand weights in both hands, lift both arms straight up as far as you can. Return to floor. Repeat.

Side plank w/ roll: Lie on your right side--push up on your right elbow/forearm (forearm is at a right angle to your body) so you are supported only by your forearm and outside of your right foot with your body in a nice straight line. Now roll your body forward so that your stomach faces the ground. (Let the toes of your left foot touch the ground for some support). Roll back to the side position. You may find it helpful to tuck your left arm around your stomach as you do this. Repeat in a controlled fashion and make sure to keep your hips from sagging at all points! Switch to left side after set on right.
Work up to 3 sets of 15/side.

Step-ups: Using a bench or stairs (two stairs is better than one) step up on one-leg and slowly return to starting position. Do 10-15 on one leg before switching to the other leg. Avoid pushing off with the back leg by keeping the ankle of the back leg locked at a right angle. Focus on pushing through the heel of the front leg which will engage the glute and hamstring. Return to the start position in a slow, controlled fashion.
Work up to 3 sets of 15, then add hand weights as you progress.

Triceps on BB: Kneel with right knee and right hand on the balance ball (back should be nearly parallel to the floor. With a hand weight in the left hand, start with the weight at the left shoulder and your elbow at your side. Straighten your arm while keeping your elbow and upper arm locked to your side, bringing the weight back to your hip. Do 10-15 on one side before switching to the other.
Work up to 3 sets of 15 before adding weight.

Superman hold: Lie on your stomach on the floor with arms extended in front of you. Lift both legs and both arms simultaneously and hold. Keep neck in a neutral position (don't look up or let it hang down)
Work up to 3 sets of (10 x 5 second holds).

Chair dips: Sit on the edge of a hard chair with your hands on the front edge of the seat. Extend your legs straight out in front of you. Supporting yourself with your arms, drop your butt down in front of the chair until upper arms are roughly parallel with the floor. Push back up until arms are straight. Repeat.
Work up to 3 sets of 10.

Equipment

Having the right equipment is essential to training comfortably and safely. Here are the items that you will need in order to compete in a triathlon
Mandatory equipment:

A Bike that Fits: For a sprint triathlon, you can use any bicycle (mountain bike, commuter bike, or racing road bike) that meets certain safety standards. In addition, you want it to be at least close to the proper size for you so that you can handle the bike properly. Keep in mind that the better the bike fits you, the more comfortable you will be. If you are having excessive neck pain, shoulder pain, knee pain, and/or back pain, the chances are that you need to be fit better to your bike or get a different size bike. Often, changes can be made to your stem length or seat height to improve your fit. It is worth making an appointment for a proper fitting to find out.

Of course, equipment costs money so you must weigh your comfort and desire for speed against your budget limitations. Here is some of the specialty equipment you might want to consider investing in.

Lightweight Helmet: This is a necessity—helmets are mandatory at all times on the bike. The helmets these days are so light that they really aren't cumbersome to wear—and they may save your life. Look for one with good venting to be sure that your head does not overheat. If the color matches your race outfit, all the better!

Bathing suit or Tri-Suit: You will need something to swim in both for training and for race day. A Tri-suit fits snugly enough to swim in but has shorts attached that have a small pad to help for comfort on the bike as well as provide more coverage if modesty dictates you need it.

Shoes to Run/Cycle: You can use a pair of running shoes for the whole race if you desire. This allows for a quick transition from run to bike because you don't need to change shoes. However, special cycling shoes can be more comfortable if you are riding a lot as they have stiff soles that support your foot. This stiffness also increases your power transfer from foot to pedal. Usually if you get bike shoes, you would also get "clipless pedals" which have a step-in mechanism that holds the shoe onto the pedal until you deliberately turn your foot to release the catch. These pedals are much safer than pedals with cages, because they don't require your hand to release the cage to let your foot out. That way your hands can remain on your brakes or handlebars when you are coming to a stop.

Optional Equipment:

Aerobars: These additions to your road bike will single-handedly improve your bike time by several minutes if you learn to use them correctly. They put your body in to a

more aerodynamic position so you do not have to pedal against so much wind resistance. They do take practice to get comfortable on them so be sure to get them early on in your training.

Heart Rate Monitor: This piece of equipment may be the one you use the most of any. Using one in training is the best way to track your improvements and ensure that you are training in the right zones at the right time. Using one in your race can help you to pace yourself properly.

Bike Shoes and Pedals: A good pair of cycling shoes will provide comfort as well as maximize your power to the pedal. Look for a good, stiff sole and a snug fit so that no energy is wasted. You do want room for your toes to move so that they don't become numb after a few hours in the saddle. An added bonus would be straps that are easy to manipulate in transition so that you can get your feet in and out fast.

Wetsuit: If you will be doing any races in cold water, you will seriously want to consider investing in or renting a wetsuit. Not only do they keep you warmer, they also make you swim faster because of their flotation properties. It is important to get a wetsuit that is made for competitive swimming (a surfing one won't do the trick!). Good brands are Xterra, Ironman, DeSoto, Orca, and Quintana Roo. Proper fit is essential so go to a store that carries them so that you can try it on. At Fast Splits in W. Newton, you can even rent one first to make sure it is comfortable in the water.

Goggles: A good pair of goggles will help you see where you are going as well as keep your eyes from burning with chlorine or salt water. Try different brands until you find a model that fits your face the best. Look for Anti-Fog and possibly a tinted lens if you expect to be swimming into the sun. Sealmask makes a goggle that greatly improves your peripheral vision while swimming and may be worth a try.

Notes on the Boston Triathlon Course

Transition Area: One of the unique things about the Boston Triathlon is that the transition area is indoors—inside the World Trade Center. It is a great weather-proof, spectator-friendly place to transition from swim to bike and bike to run. You will start the swim on the right hand side of the WTC (as you face the water) and finish the swim on the left hand side. This means you enter the transition from the left after the swim—be sure you know which way to run to your bike. The exit to the bike is on the far right. You cannot get on your bike until you are outside on the street and over the "mount" line. You also must dismount at this line on the way back in as you return to the transition through the same doorway. The run starts on the right side as well but you will exit a side doorway and run along the building before exiting to the street.

Swim: The 800-meter swim is in the Boston Harbor in September. The water is generally pretty cold—in the 60's (degrees Fahrenheit). Wetsuits have always been allowed (but not required). I would recommend wearing one. Not only will a wetsuit keep you warm, it will also give you the benefit of extra flotation so you will swim faster. Please remember to practice in a wetsuit before the race if you plan to wear one.

The swim is three sides of a square—you swim around the World Trade Center pier. There are only two left hand turns with big orange buoys set on the corners of the pier for sighting. To avoid the crowds at the start, start on the right hand side of the start area—you may have to swim a little farther, but you will avoid the congestion at the first turn. To exit the swim, you have to climb up a ladder on to a boat and then up some stairs to get to the pier and the WTC. Be careful as it can be slippery with wet feet.

Boston Harbor is salt water and is normally clean enough to swim in. However, if there is a big storm the day before the race, it could cause the swim to be cancelled due to polluted run-off. In this case, the organizers may substitute a short run for the swim. In triathlon, you have to learn to roll with the punches and be flexible!

Bike: The 12-mile bike ride is along mostly flat but by no means "pristine" roads. This is in the middle of Big Dig territory after all! Be alert for potholes and cracks in the road. The course is well-marked as you ride over the bridge out of S. Boston, through the North End and over to Memorial Drive. It is a treat to ride on Memorial Drive with great views of the city and no traffic. Although the roads are closed, it is always best to ride defensively as you never know when a car might sneak through. Stay to the right side of the road unless you are passing. Always look behind you before you pull in to the left side of the road to be sure someone isn't simultaneously passing you.

Run: The 3-mile run is a flat out-and-back course. There is one water stop on the course. Use the other triathletes out on the course for inspiration and acknowledge your cheering fans with a smile.