tri-newbies online

training program

11 week sprint distance

beginner level

11 Week Sprint Distance Program – Beginner

11 Week Calendar

Mon	Tue	Wed	Thurs	Fri	Sat	Sun
OFF	Run: 15 min	Bike: 5 miles	Swim: 200 yards	OFF	Run: 15 min	Bike: 5 miles
OFF	S: 200 yds R: 15 min	Bike: 6 miles	Swim: 200 yards	OFF	Run: 20 min	Bike: 8 miles
OFF	S: 200 yds R: 20 min	Bike: 6 miles	S: 300 yds W: 30min	OFF	Run: 30 min	Bike: 10 miles
OFF	S: 300 yds R: 20 min	Bike: 8 miles	S: 300 yds W: 30 min	OFF	Run: 40 min	Bike: 10 miles
OFF	Run: 20 min	Swim: 300 yards	BRICK	Swim: 400 yards	Run: 40 min	Bike: 12 miles
OFF	Run: 30 min	Swim: 400 yards	BRICK	Swim: 400 yards	Run: 40 min	Bike: 15 miles
OFF	Run: 30 min	Swim: 400 yards	BRICK	Swim: 500 yards	Run: 40 min	B: 15M W: 30 min
OFF	Run: 30 min	Swim: 500 yards	BRICK	Swim: 500 yards	Run: 50 min	B: 20M W: 30 min
OFF	S: 500 yds R: 30 min	Bike: 15 miles	S: 600 yds W: 45 min	OFF	Run: 50 min	B: 20M W: 30 min
OFF	S: 600 yds R: 30 min	Bike: 15 miles	S: 600 yds W: 45 min	OFF	Run: 60 min	B: 20M W: 30 min

Race Week

OFF	S: 500 yds R: 30 min	Bike: 15 miles	OFF	S: 200 yds R: 15 min	Race Day	

Key: S – Swim, R – Run, B – Bike, W – Walk

Part 2: Detailed Training Calendar

Week 1

Monday: OFF

Tuesday: Run: 15 minutes

9 an 1/1 - 9 minute warm-up followed by running 1 minute and walking 1 minute for the remainder of the 15 minutes.

Workout Description: 9 and 1/1 means you begin all of your runs with a 9 minute warm-up. The warm-up consists of a 5 minute walk followed by a light stretch theno a 1 minute easy jog, 1 minute walk (two times). Total time of the warm up is a little over 9 minutes including the light stretch. Keep your HR below your running heart rate zone during the warm-up. After the warm-up, the remaining portion of the run will be made up of a combination of running and walking. For the above workout, the remainder of your run will consist of 1 minute running, 1 minute walking. ****NOTE:** If you are an experience runner, you do not have to run/walk. Please refer to the Program Guide for more on the warm-up and run descriptions.

Wednesday: Bike 5 miles

Warm-up: start out with a 10 minute spin.
Main portion: Cycle in your aerobic zone.
Cool-down: Spin easy, bring your HR down for last 5 minutes.

Workout Description: For all of your bike rides, begin with an easy 10 minute warm-up. Start out spinning in an easy gear. By spinning, I mean pedaling at a cadence – pedaling fast! You will probably bounce in your saddle while spinning. That's ok. As your hip flexors begin to loosen up you will begin to develop a feel for spinning. After your warm-up, build your effort to reach the lower end of your aerobic zone. Remain in your zone for the bulk of your ride. Continue to focus on spinning when you ride. Begin to get a feel for your bike, the gears etc. Practice shifting gears to develop a feel for the various gear combinations. By gear combination I am referring to the combination of either the big or small front chain ring and the rear cog. Try to remain in your heart rate zone throughout the ride. Please refer to the Program Guide for details. Stay aerobic and Don't forget to drink!

Thursday: Swim: 200 yards (meters)

Warm-up: swim 50 freestyle easy. Rest 2 minutes.
Main set: swim 4 x 25's easy freestyle -15 seconds rest between each
Swim down: Swim 50 very easy

Workout Description: The total distance of this workout is 200 yards or meters depending upon your pool facility. The warm-up is 50 easy. If you are swimming in a 25 yard pool, you will swim 50 yards or 2 lengths of the pool. In a 50 meter pool, you will swim 1 length. The main set is 4 x 25's freestyle with 15 seconds rest between each 25. In a 25 yard pool, you will swim 1 length of the pool, four times with 15 seconds rest between each length. In a 50 meter pool, you will swim halfway down, stop and rest. If the pool is too deep to stand, hang on to the lane rope for your rest. Finally, the swim down is another 50 easy. In a 25 yard pool, you will swim 2 lengths easy. In a 50 meter pool, you will swim 1 length easy. Again, refer to the program guide for all details.

Friday: OFF

Saturday: Run: 15 minutes

9 and 1/1 - 9 minute warm-up followed by 1 minute running and 1 minute walking for the remaining 6 minutes of your run.

Sunday:

Bike: 5 miles
Warm-up: start out with a 10 minute spin.
Main portion: Cycle in your aerobic zone.
Cool-down: Spin easy, bring your HR down for last 5 minutes.

Week 2

Monday: OFF

Tuesday:

Swim: 200 yards (meters)
Warm-up: 50 easy freestyle
Main set: 2 x 50's easy freestyle -15 seconds rest between each
Swim down: 50 swim down real easy

Run: 15 minutes
9 and 2/1. 9 minute warm-up, then 2 minute run, 1 minute walk for the remaining 6 minutes of your run.

Wednesday: Bike: 6 miles

Warm-up: 10 minute easy spin. Keep HR below zone. After 10 minutes, build your effort and ride in your aerobic zone. Allow time to cool down and bring your HR down close to 100 bpm

Thursday: Swim: 200 yards (meters)

Warm-up: swim 50 freestyle easy. Rest 2 minutes.
Main set: swim 4 x 25's easy freestyle -15 seconds rest between each
Swim down: Swim 50 very easy

Friday: OFF

Saturday: Run: 20 minutes

9 and 2/1 - 9 minute warm-up, then 2 minute jog, 1 minute walk for the remaining 11 minutes of your run.

Sunday: Bike: 8 miles

Warm up with 10 minutes spinning. Keep HR below your zone. After 10 minutes, slowly bring your HR rate up to aerobic zone for the remainder of your ride. Allow enough time for cool down.

Week 3

Monday: OFF

Tuesday: Swim:

200 yards (meters)
Warm-up: 50 easy freestyle
Main set: 2 x 50's easy freestyle -15 seconds rest between each
Swim down: 50 swim down real easy

Run: 20 minutes
9 and 3/1 - 9 minute warm-up, then 3 minutes jog, 1 minute walk for remainder of your run.

Wednesday: Bike 6 miles

Warm-up: 10 minute easy spin. Keep HR below zone. After 10 minutes, build your effort and ride in your aerobic zone. Allow time to cool down and bring your HR down close to 100 beats per minute or lower.

Thursday:

Swim: 300 yards (meters)
Warm-up: 50 easy swim freestyle
Main set: swim 8 x 25's freestyle -10 seconds rest between each
Swim down: 50 swim down real easy

Walk: 30 Minute
Keep the walk brisk. This will act as great means of active recovery.

Friday: OFF

Saturday: Run: 30 minutes

9 and 3/1. 9 minute warm-up, then 3 minutes jog, 1 minute walk for remainder of run.

Sunday: Bike: 10 miles

Warm up with 10 minutes spinning. Keep HR below your zone. After 10 minutes, slowly bring your HR rate up to aerobic zone for remainder of your ride. Allow enough time for cool down.

Week 4

Monday: OFF

Tuesday:

Swim: 300 yards (meters)
Warm-up: swim 50 easy
Main set: swim 4 x 50's freestyle -15 seconds rest between each
Swim down: 50 swim easy

Run: 20 minutes
9 and 4/1 - 9 minute warm-up, then 4 minutes jog, 1 minute walk for the remainder of your run.

Wednesday: Bike 8 miles

Warm up with 10 minutes spinning. Keep HR below your zone. After 10 minutes, slowly bring your HR rate up to aerobic zone. Allow enough time for cool down.

Thursday:

Swim: 300 yards (meters)
Warm-up: 50 easy swim freestyle
Main set: swim 8 x 25's freestyle -10 seconds rest between each
Swim down: 50 swim down real easy

Walk: 30 Minute
Keep the walk brisk. This will act as great means of active recovery.

Friday: OFF

Saturday: Run 40 minutes

9 and 3/1 - 9 minute warm-up, then 3 minutes jog, 1 minute walk for the remainder of your run.

Sunday: Bike 10 miles

Remember, warm-up, cool down and drink plenty of fluids!

Week 5

***NOTE:** We will begin brick workouts this week (week 5) through week 8

Monday: OFF

Tuesday: Run 20 minutes

9 and 5/1 - 9 minute warm-up, then 5 minutes jog, 1 minute walk for the remainder of your run.

Wednesday: Swim: 300 yards (meters)

Warm-up: swim 50 easy
Main set: swim 4 x 50's freestyle -15 seconds rest between each
Swim down: 50 swim easy

Thursday: Brick Workout: 30 Minute Bike/10 Minute Run/20 Minute Walk

Warm up on the bike with 10 minutes spinning. Keep HR below your zone. After 10 minutes, slowly bring your HR rate up to aerobic zone for the remainder of the ride. Allow enough time for cool down. Following the bike, run easy for 10 minutes. Begin the run with a 2 minute walk for your warm-up. Then run 3 minutes/walk1 minute for the remaining 8 minutes of your run. Try and keep your heart rate in your running aerobic zone. Then finish off the brick with a 20 minute brisk walk. **Please see Program Guide for more on your Brick workouts**

Friday: Swim 400 yards (meters)

Warm-up: swim easy 50
Main set: swim 6 x 50's freestyle -10 seconds rest between each
Swim down: swim easy 50

Saturday: Run 40 minutes

9 and 4/1 - 9 minute warm-up, then 4 minutes jog, 1 minute walk for the remainder of your run

Sunday: Bike 12 miles

Don't forget - include a good warm-up and allow for a cool down. And don't forget to drink!

Week 6

Monday: OFF

Tuesday: Run 30 minutes

9 and 6/1 - 9 minute warm-up, then 6 minutes jog, 1 minute walk for the remainder of your run

Wednesday: Swim 400 yards (meters)

Warm-up: Swim easy 50
Main set: 12 x 25's swim freestyle - 10 seconds rest between each
Swim down: 50 swim easy

Thursday: Brick Workout: 30 Minute Bike/10 Minute Run/20 Minute Walk

Follow the steps of the brick as you did in week 5. Remember on the run, warm-up for 2 minutes followed by 3 minutes running/1 minute walking for the remaining 8 minutes. Then a 20 minute brisk walk.

Friday: Swim 400 yards (meters)

Warm-up: swim easy 50 freestyle
Main set: swim 6 x 50's freestyle -10 seconds rest between each
Swim down: swim easy 50

Saturday: Run 40 minutes

9 and 5/1 - 9 minute warm-up, then 5 minutes jog, 1 minute walk for the remainder of your run

Sunday: Bike 15 miles

Your distances are increasing! Make sure to warm-up, cool down and don't forget to stay hydrated!

Week 7

Monday: OFF

Tuesday: Run 30 minutes

9 and 7/1 - 9 minute warm-up, then 7 minutes jog, 1 minute walk for the remainder of your run.

Wednesday: Swim 400 yards (meters)

Warm-up: Swim easy 50
Main set: 12 x 25's swim freestyle - 10 seconds rest between each
Swim down: 50 swim easy

Thursday: Brick Workout 30 Minute Bike/10 Minute Run/20 Minute Walk

Follow the steps of the brick as you did the week before. Remember on the run, warm-up for 2 minutes then 3 minutes run/1 minute walk for the remaining 8 minutes. Then a 20 minute brisk walk.

Friday: Swim 500 yards (meters)

Warm-up: swim 50 easy
Main set: 16 x 25's swim freestyle - 5 sec. rest bet ea.
Swim down: swim 50 easy

Saturday: Run 45 minutes

9 and 6/1 - 9 minute warm-up, then 6 minutes jog, 1 minute walk for the remainder of your run.

Sunday:

Bike: 15 miles
Make sure to warm-up, cool down and don't forget to stay hydrated!

Walk: 30 Minute
Keep the walk brisk. This will act as great means of active recovery.

Week 8

Monday: OFF

Tuesday: Run 30 Minutes

9 and 8/45 - 9 minute warm-up followed by 8 minutes jogging and 45 seconds walking for the remainder of the run.

Wednesday: Swim 500 yards (meters)

Warm-up: easy 50 swim
Main set: 8 x 50's swim freestyle -10 seconds rest between each
Swim down: 50 swim easy

Thursday: Brick Workout 30 Minute Bike/10 Minute Run/20 Minute Walk

Follow the steps of the brick as you did the week before. Remember on the run, warm-up for 2 minutes then 3 minutes run/1 minute walk for the remaining 8 minutes. Then a 20 minute brisk walk.

Friday: Swim 500 yards (meters)

Warm-up: swim 50 easy
Main set: 16 x 25's swim freestyle - 5 seconds rest between each
Swim down: swim 50 easy

Saturday: Run 50 minutes

9 and 7/1 - 9 minute warm-up, then 7 minutes jog, 1 minute walk for the remainder of your run. Remember, as we up the distances, injury prevention is key! Try to keep your Heart Rate Low!

Sunday:

Bike: 20 miles
We are increasing the distance one last time! Make sure to warm-up, cool down and don't forget to stay hydrated! Are you working on your pre-race nutrition?

Walk: 30 Minute
Keep the walk brisk. This will act as great means of active recovery.

Week 9

Monday: OFF

Tuesday:

Swim 500 yards (meters)
Warm-up: easy 50 swim
Main set: 8 x 50's swim freestyle -10 sec. rest bet ea.
Swim down: 50 swim easy

Run: 30 Minutes
9 and 8/.30 - 9 minute warm-up. Then 8 minutes jog followed by 30 seconds walk for the remainder of the run.

Wednesday: Bike 15 miles

Make sure to warm-up, cool down and don't forget to stay hydrated!

Thursday:

Swim: 600 yards (meters)
Warm-up: 50 easy swim
Main set: 20 x 25's swim freestyle - 5 sec. rest bet ea.
Swim down: 50 swim easy

Walk: 45 Minute
Keep the walk brisk. This will act as great means of active recovery.

Friday: OFF

Saturday: Run 50 minutes

9 and 8/1 - 9 minute warm-up, then 8 minutes jog, 1 minute walk for the remainder of your run. Remember, as we up the distances, injury prevention is key! Try to keep your Heart Rate Low

Sunday:

Bike: 20 miles
Make sure to warm-up, cool down and don't forget to stay hydrated! Are you working on your pre-race nutrition?

Walk: 30 Minute
Keep the walk brisk. This will act as great means of active recovery.

Week 10

Monday: OFF

Tuesday:

Swim: 600 yards (meters)
Warm-up: 50 easy freestyle
Main set: 500 swim freestyle straight and easy
Swim down: 50 swim easy

Run: 30 Minutes
9 and 8/.15 - 9 minute warm-up. Then 8 minutes jog followed by 15 seconds walk for the remainder of the run.

Wednesday: Bike 15 miles

Make sure to warm-up, cool down and don't forget to stay hydrated!

Thursday:

Swim: 600 yards (meters)
Warm-up: 50 easy freestyle
Main set: 5 X 100's swim easy freestyle. Rest 15 sec. between each.
Swim down: 50 swim easy

Walk: 45 Minute
Keep the walk brisk. This will act as great means of active recovery.

Friday: OFF

Saturday: Run 60 minutes

9 and 8/1 - 9 minute warm-up, then 8 minutes jog, 1 minute walk for the remainder of your run. Remember, as we up the distances, injury prevention is key! Try to keep your Heart Rate Low

Sunday: Bike 20 miles

Make sure to warm-up, cool down and don't forget to stay hydrated! This is the last long ride before your race and it is worth repeating...Are you working on your pre-race nutrition?

Walk: 30 Minutes
Keep the walk brisk. This will act as great means of active recovery.

Week 11 – RACE WEEK!

Monday: OFF

Tuesday:

Swim: 500 yards (meters)
Warm-up: swim 50 easy
Main set: 400 swim (work on your sighting!)
Swim down: swim 50 easy

Run: 30 Minutes
9 and 21 - 9 minute warm-up. Then jog easy for 21 minutes.

Wednesday:

Bike: 15 miles
Make sure to warm-up, cool down and don't forget to stay hydrated!

Thursday: OFF

Friday:

Swim: 200 yards (meters)
Warm-up: swim 50 freestyle easy. Rest 2 minutes.
Main set: swim 4 x 25's easy freestyle -10 seconds rest between each
Swim down: Swim 50 very easy

Run: 15 Minute
9 and 6 - 9 minute warm-up. Then 6 minutes jog for the remainder of the run.

Saturday: RACE DAY!

Part 3: Program Guide

Introduction

Congratulations and thank you for choosing the Tri-Newbies Online 11-Week Beginner Training Program! The following program is designed for the individual who would like to complete his or her first sprint triathlon with no regard to time. This program takes into consideration that you can swim at least 8 lengths or 200 yards in a 25 yard pool (4 lengths/200 meters in a 50 meter pool), run 2 miles - two times per week and cycle a minimum of 5-8 miles (about 45 minutes) regardless of speed.

Read through the entire training calendar, detailed training guide and program guide first. Most of your questions should be answered. However, if you ever have any questions, please feel free to contact me via email me at hazen@trinewbies.com. You will also have access to the entire trinewbies.com website which includes over 75 articles for training and nutrition as well as the most active Triathlon Discussion Forum on the Net!

Important Note: For the first two weeks, it is important that you stick to the program. Do not skip a workout. Not just for the obvious physical benefits, but primarily to develop a habit of simply "sticking with it."

This will be the time when you will need to make some adjustments in your life, replacing old habits with new habits! It is the time to find out WHEN you can train based on your daily responsibilities (work, your spouse, children, class, etc). Do not skip a workout just because it may not be convenient.

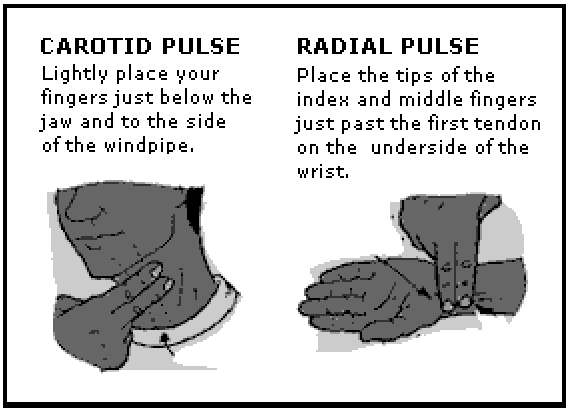
For students or those of you who work full time, you may have a preset daily schedule week in and week out which will help you remain consistent with your training. However, others (i.e. part timers or those in the service industry) may have a work schedule that changes each week. Whatever the case may be, you need to take the time to plan ahead for each coming day. This may require you to get up earlier in the morning to get in a particular workout. Perhaps your lunch break will server as a good time to run, swim or head to the weight room.

Train during YOUR time and not your spouses or kids. Don't miss your child's soccer game or jeopardize your private time with your spouse simply because of your training. I think you will find, once you have accomplished the task of balancing your training with your daily lifestyle, the training will become part of your daily lifestyle and not something you HAVE to do.

Also, try to divide your workouts into a.m. and p.m. In other words, try not to do the workouts back to back. For some this may not be possible. However, adequate rest between workouts will help insure optimal muscle recovery and prevent overuse injuries.

Heart Rate Training

The training program should be completed at an easy, aerobic pace. If you own a heart rate monitor and are familiar with aerobic heart rate training, you will want to train at the lower end of your aerobic zone. If you do not own one, I suggest making the purchase. Do your research. You will find several heart rate monitors on the market today that are extremely affordable. If you do make the purchase, make sure you get one with a **stopwatch feature** combined with the **heart rate feature**. If you choose not to purchase one, than you must learn to evaluate your efforts through other means. On the run, there is the classic "talk" test - basically, you want to run at a pace that allows you to talk comfortably while running. And to some extent, this test could be used on the bike as well. If you do not have a heart rate monitor, you can check your pulse periodically by placing your finger on your carotid artery either under your neck or on your wrist. Please refer to the image above. Once you find your pulse, count the beats for six seconds and add a zero to the total. For example:



14 beats in 6 seconds = 140 beats per minute (bpm).

This reading is not as accurate as would be displayed on a heart rate monitor but it is quick.

I subscribe to the **Maffetone Method or 180 method** of determining your aerobic heart rate zone. This is just one method and certainly not the only one. (*for a complete breakdown of this and other popular methods of heart rate training, please refer to the article* ***Methods of Heart Rate Training*** *located in the Appendix of this training manual.)* According to the 180 method, the following formula will give you your aerobic heart rate zone:

To find the upper end of your aerobic training zone, subtract your age from 180. From that result and subtract 10 to find the lower range of your aerobic training zone. If you feel this range is too high then bring everything down 5-10 beats per minute. Your aerobic zone will be measured in beats per minute (bpm).

For example:
Let's look at a 37 year old individual in good shape
180 - 37 = 143. This figure (143) represents the top end of the aerobic training zone.
143 - 10 = 133 This figure (133) represents the lower end of your aerobic training.
The aerobic range of the individual above is 133-143 beats per minute.

If you are not in good physical condition at this point, that is OK! Once you find your aerobic zone, simply drop your overall zone by 10 bpm. Looking at the example above, this individual would drop the overall range down to 123-133 beats per minute (a 10 bpm drop).

For the run, it is important that you stay in your particular zone. Even if it means having to walk in order to keep your heart rate within your aerobic zone.

For the bike, for some of you, your heart rate may be lower on the bicycle and it may be difficult (at least initially) to get your heart rate high enough for your "aerobic zone." That's ok! Simply adjust your range downward 5-10 beats for the bike ride. However, try and keep it on the higher end.

For the swim, I have created three heart rate targets. I like to start with a base aerobic range of 140 –160 bpm for all individuals. This range is not set in stone and should be used as a guide only.

- For individuals in their 40's and up, try to keep the heart rate between 140 and 150 beats per minute and ideally closer to 140 bpm. **Note:** Because swimming requires so much energy to move the body forward, it is very difficult to sustain a heart rate much lower than 140 beats per minute and still maintain an effective stroke. If you can, wonderful!
- For athletes in their late twenties and thirties, try to keep the heart rate range between 150 and 160 beats per minute but ideally closer to 150 beats per minute.
- For individuals in their twenties and younger, 160 beats per minute should be fine.

The idea behind these swimming target heart rate ranges, is to have you properly prepared for the bike ride upon exiting the water during a race. The closer your heart rate is to your bike training rate, the better the outcome of your entire race. For example:

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For ten weeks you have been training on the bike at an average heart rate of 125 bpm (beats per minute). Come race time, you exit the swim with a heart rate of 175bpm. As you begin the bike ride, you are now a full 50 beats per minute above your bicycle training level! Within a mile or two of the ride, your heart rate will drop, but probably not the full 50 beats. More than likely, it will settle in at about 145-155beats per minute or a 20-30 bpm recovery. Thus you will be cycling with a heart rate some 20-30 beats higher than your training rate! And this will be the beginning of the end, for you will pay the price on the run. Now, if you were to exit the water in the same race with your heart rate at or near 150 beats per minute, and you recovered the same 20-30 bpm during the bike ride, your heart rate would settle in somewhere between 120 and 130 bpm - your normal bicycle training rate. This would only leave better prepared for the run.

Because this 10-week program is designed for the beginner, the heart rate monitor should be used as a means of keeping yourself in "aerobic" check. BE STRICT with yourself and do not let anyone else influence your training. If you have been training with a partner or are currently looking for one, explain to the individual what your goals are to make sure he/she will go along. If, for example, you are a runner and are used to training at a faster pace, that will probably change, at least initially. Why? Because you are now incorporating three different sports and weight training as part of your overall training regimen. You will need time to give your body a chance to acclimate to the stresses (especially with the addition of the bicycle which adds additional stress to the legs). Therefore, your running pace initially should be slower than normal. Thus, running with a partner who is used to you running faster than your new "aerobic" pace may cause you to run too fast during your training. This may result in an injury. Stick to YOUR training program and not someone else's. If someone chooses to train with you according to your needs, terrific! If not, then head out on your own. The beauty of a heart rate monitor is it will allow you to train solo. It is like having a personal coach along side of you.

And this is true for your cycling as well. However, for safety reasons, sometimes it is a good idea to ride with a partner. But, unless you are cycling on a deserted highway, the opportunity to ride side by side and chat will not always arise, so you will be forced to ride front-to-back. If you are riding with a partner who is faster on the bike, spend more time drafting behind him/her. This will help keep your heart rate lower while still keeping pace with the other cyclist. Most importantly, be safe!

Swimming

The swimming workouts for the entire program are included in the detailed workout schedule (p. 3 –10) and in the Appendix of this training program. The workouts are designed around training in a 25-yard pool. If you are swimming in a 25-meter pool, you can use the same workouts. For a 50-meter pool, there will be some changes but follow the distances of each workout. You are certainly not bound by these workouts so feel free to tweak them as you see fit.

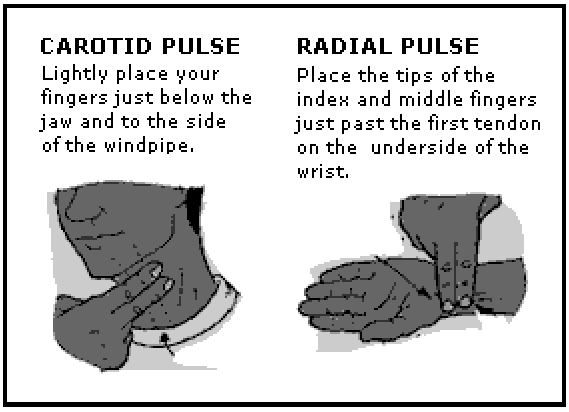
Below is a distance breakdown of a 25 yard pool and 50 meter Pool. As stated above, regardless of the pool in which you swim, complete the distances given in the workouts:

25 Yard (meter) Pool - usually standard length
1 length = 25 yards (meters)
2 lengths = 50 yards (meters)
4 lengths = 100 yards (meters)
1/4 to 1/2 mile = about 500- 800 yds (meters) = 20 to 32 lengths

50 Meter Pool
1 lengths = 50 meters
2 lengths = 100 meters
1/4 mile = about 400 meters = 8 laps

Initially, you will not be spending very much time in the water. That's ok. It will not be wasted time. The swim workouts will increase over the 11-week period in intensity and distances. However, the increases will be gradual. If you are an experienced swimmer, you may tweak the workouts as you see fit.

Stroke Drills. Stroke drills are not included as part of your swimming workouts. Insert them where you would like. However, do not replace the main set of each workout with stroke drills. If you do want to include drills in your workout, do so after the warm-up and before the main set. You will find four swim drills located in the Appendix of this training program. They are helpful. You can also find them on the trinewbies.com website. Some words about stroke drills. There is no sense in practicing a stroke drill if you are not performing them properly. And the only way to make sure you are doing them correctly is to have someone with experience observing you. If there is a swim coach at your pool, offer to pay him or her a few bucks to watch you swim, analyze your stroke and let you know which of these drills to apply. It can be done in a few minutes time.



Swim Heart Rate Training - The main set of each workout will be interval-based. DO NOT swim these fast. Swim them slow enough so that you are not gasping for air between swims. And check your heart rate periodically throughout the set. The quickest way to do this is by placing your finger under your chin/neck (or wrist), find your pulse and count the beats for a six second count and add a zero to the total. This reading is not as accurate as would be displayed on a heart rate monitor but it is quick. :

14 beats in 6 seconds = 140 beats per minute (bpm).

As described in the Heart Rate Training section of this guide, I have created three heart rate targets for swimmers. I like to start with a base aerobic range of 140 –160 bpm for all individuals. This range is not set in stone and should be used as a guide only.

- For individuals in their 40's and up, try to keep the heart rate between 140 and 150 beats per minute and ideally closer to 140 bpm. **Note:** Because swimming requires so much energy to move the body forward, it is very difficult to sustain a heart rate much lower than 140 beats per minute and still maintain an effective stroke. If you can, wonderful!
- For athletes in their late twenties and thirties, try to keep the heart rate range between 150 and 160 beats per minute but ideally closer to 150 beats per minute.
- For individuals in their twenties and younger, 160 beats per minute should be fine.

Remember, the bulk of your swimming will be aerobic. So you do not want your heart rate to be too high during your swim sets. Try and keep it close to your target range.

Flip turns - do not worry about performing freestyle flip turns during your swim workouts unless you feel very confident doing them. Simply take a quick breath on the wall and push off.

Breathing - you should get in the habit of breathing every stroke (to one side). The more oxygen you take in, the lower your heart rate will remain. Having said that, bilateral breathing or breathing every three strokes is very helpful:

1. It will balance out your freestyle stroke.
2. It will get you used to looking in both directions, which may help during a race when trying to find your mark.

Work on your bilateral breathing during your warm-up and swim drills (if you choose to do drills)

Practice Your Sighting – Unlike the pool in which you train, you will not have a thick black line running along the bottom of the ocean or lake to help guide you in a straight line during your race. You must learn to lift your head and sight specific points of reference in order to stay on course. During your swim workouts, practice lifting your head and looking forward say once or twice per length during your main set. This is done by lifting your head and looking forward to breath vs. turning your head to the side to breath. Ideally, you want to make this part of your stroke. **However, if you have to stop and wade in the water to catch a glimpse of where you are, no problem!** Whether training in the pool, a lake or the ocean, learn to spot various land markers. It may be the top of a fence, a tall tree, a water tower, or the top of a building, something that you can see each time you lift your head when you look forward. In a triathlon, there will be orange markers floating in the water outlining the swim course. Prior to the race, get in the water and practice sighting these markers during your warm-up. This is where your bilateral breathing will help as well.

Lifting your head to look forward may seem easy at first, but you will find it can actually be difficult. It will put some stress on your neck muscles and for the less experienced swimmer it will actually cause your feet/lower legs to drop while swimming. This can throw you off synch. So again practice this during your swim training. **You will find a complete article on Open Water Swimming Tips and Techniques located in the Appendix of this training manual.**

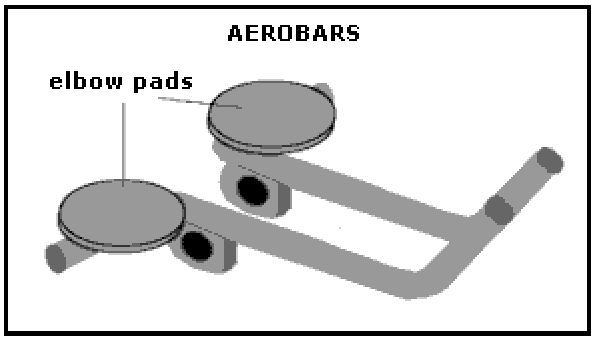
Cycling

Cycling Safety – By law, you are required to ride your bicycle on the roads (not sidewalks) along side our 3000 lb, four-wheeled friends! In some states, bicycle paths or roadside shoulders will be designated along side the road for specifically for bicycling. However, you will still be on the road traveling with faster moving automobiles. Be smart out there folks. Avoid cycling during peak traffic hours (morning commutes, lunch hour, five o'clock hour). Find a road or highway that is least traveled upon. If possible, ride with a friend. When riding, take along some money, spare tubes and the necessary items for flatting, even a cell phone. Make sure you have the necessary nutrition before heading out. Always ride with traffic along the right side of the road. If there is a shoulder, ride within the shoulder. Keep your eyes out for gravel and broken glass along the side of the road or shoulder. Check with your local bike shop for any organized group rides in your area or safe bike routes.

Heart Rate Training - As mentioned in the introduction, all of your training should be aerobic, concentrating on staying within your aerobic heart rate zone. Always perform a warm-up on your bike rides. Start with an easy 10-15 minute warm-up spinning in a very easy gear, keeping your heart rate very low (below your aerobic heart rate zone). As you approach the end of your warm-up, gradually begin to increase your heart rate by building your effort until your heart rate reaches the lower level of your aerobic training zone. Remember, It may be difficult to cycle in the initial zone you created by the 180-method (the actual zone created by subtracting your age from 180 and then subtracting 10 from that figure). So you will need to experiment to find out what works best for you. Begin by subtracting 5 to 10 beats from your initial aerobic zone and determine how it feels during the ride.

Heart Rate Training and Your Geographical Location - The flatter the terrain on which you ride, the easier it will be to maintain a steady heart rate and to monitor your heart rate. If you live in a hilly or mountainous area, your heart rate will be more erratic during your ride, usually rising on the uphill climbs and dropping during the descents. When riding uphill, shift to an easier gear (so your pedaling becomes easier) and try to maintain a smooth pedal cadence or pedal stroke. Avoid pumping the pedals if possible. By pumping, I am mean the act of you stamping on the pedals during the downward portion of your pedal stroke. The harder you pump, the higher your heart rate will be. Please understand, it can be difficult to maintain a smooth cadence or pedal stroke when cycling uphill. And at times you may indeed have to pump the pedals, especially in the beginning of your training. But you should at least attempt to keep your heart rate as low as possible during the uphill portion of your rides. And by doing this is, try to remain in the saddle while riding uphill and only climb out as a last resort.

Bicycle Choice – At this point, do not invest in a brand new bicycle. If you already have a road bike, great! Use it! If you have a mountain bike or a hybrid, that is fine too! Many of your sprint triathlons today have a "fat tire" division for those who ride and train on a mountain/hybrid bike. If you plan on riding a mountain/hybrid type of bike and your bike currently has knobby tires, I recommend switching the tires out for road tires designed for these types of bikes. The tires will not be as narrow as a true road tire, but they will be smooth and rounder than a knobby tire. Your local bike shop should be able to help. If you find a great deal on a used road bike, terrific! But do not spend too much at this point. If you do purchase a used bike or are you are using your current bicycle, take it by your local bike shop and get it tuned up.

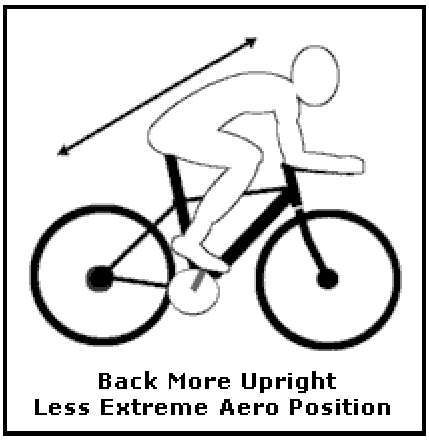


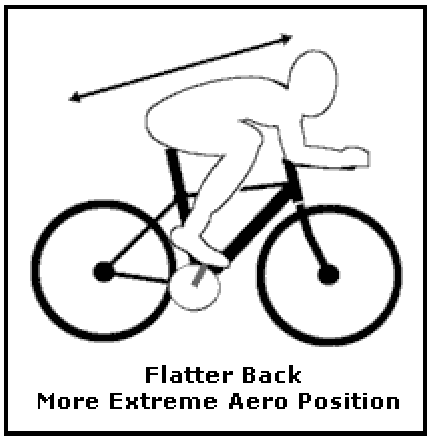
Aerobars and the Aero position: Clip-on aerobars like those illustrated on the right, are attached to the handlebars of a biycle and help place the rider in an aerodynamic position. By bending at the waist, the rider rests his/her elbows on the elbow pads, griping the bars out in front. **(see illustration on the following page)** This puts the rider in an aerodynamic position. Now, if you do not have a set of aerobars for your bicycle, do not worry. They are not crucial to your training or racing at this level. However, they are helpful, especially when riding in windy conditions and will benefit your training and racing. Furthermore, you can attach them on mountain/hybrid bike handlebars as well. I will leave that purchase up to you.

If you do decide to stick with this sport, I do recommend purchasing a set. Should you decide to purchase a set or your already own a pair, it is important to get used to riding in the aero position. **(see illustration on the following page)** Initially, you may find riding in this position uncomfortable, with the main discomfort coming from stress on the lower back and/or upper glutes (upper portion of your rear!). Do not start out in an extreme aero position. Be conservative and start out in a more upright, relaxed position. If possible, visit your local bike shop and see if they can help with your bike positioning. No matter what, you will probably notice some initial stress on the lower back. But with practice and a good lower back stretching routine you will begin to find your comfort zone.

If you cycle on flat roads, you will spend most of your ride in the aero position. If this is case, take breaks during your ride by sitting up and stretching your back.

For example, if you wear a sport wristwatch, set the alarm for 5 minutes while riding. Each time the alarm sounds, sit up, stretch your back, take a drink and then get back into the areo position. This not only helps acclimate your back to its new position, but it also insures that you hydrate and take in nutrition during your ride. If you live in a hilly or mountainous area, your chances will be limited to riding in the aerodynamic position.





Be extremely careful when speeding downhill. Do not ride in the aero position on the descents. Keep control of your bike by keeping your hands on the handlebars. If you have a stationary trainer, you can practice your aero positioning and determine your comfort zone before hitting the roads.

Stationary bike trainers: if you live in colder climates during the winter month's, Mother Nature does not provide many opportunities to ride outdoors. Therefore, a stationary bike trainer is the next best alternative. And you can spend anywhere from $150 - $1500 on a bike trainer. Again, this is not a necessary purchase. However, if you purchase one, be frugal and buy the least expensive model. I personally think it is an excellent purchase, regardless of the season. Even if you no longer train and race you could probably sell your trainer. Yes, there will probably be several stationary trainers in your local gym. However, not all gym cycles simulate your real bicycle at home. If you do decide to use the trainer at your gym here are few tips:

- Do not use the recumbent bicycles unless it is all there is. Recumbent bikes are bikes that have you seated like a chair and the pedals are out in front of you. Don't get me wrong. These are good machines, very comfortable and excellent for individuals who have experience chronic lower back pain. But they do not simulate the type of cycling you will doing during your outdoor training and your racing. So choose a stationary bike in your gym that resembles a real bicycle
- Make sure the seat height and handlebar height on the stationary trainer are the same or close to the seat height and handlebar height on your real bicycle. If you have to take measurements from your real bike and transfer these to the stationary trainer, then do so! Whenever I used to attend the spin classes at my old gym, I literally took a measuring tape with me to the class and adjusted the stationary bicycle to the specs of my road bike.
- Most stationary trainers have preset courses from which to choose. When scrolling through the menu on the stationary trainer, choose a course that with various level changes or hills. Don't simply ride a flat course for the given period of time.

If you do opt to purchase a stationary trainer for your home or you already have one, there is one unfortunate fact. They can be boring! So mental toughness will come into play. One way to combat the boredom is riding to your favorite music! Pick yourself up a portable radio, a CD player, an mp3 player or cassette player and use it while your ride. There are also some excellent training/workout videos on the market created specifically for stationary trainers. For the most part, you will not be able to accurately measure your mileage on the trainer, so to be safe, figure about 15-17 miles covered in an hour. If during the winter month's you are able to head outside for a ride, pay attention to your average speed and heart rate. You can then transfer that knowledge to your indoor training.

Cycling Tips

- Learn some basic bicycle maintenance – especially changing your tire and specifically your tire tubes. Which reminds me, I suggest training on clincher tires (road bike tires that require a separate tube). The tubes only cost a few dollars and you can pack a few in your seat pack for your ride. Practice changing the tubes in your tires at home before heading out for your first long ride. It will only take you once or twice and you will quickly get a feel for doing it. If you need a jump-start, visit your local bike shop and have them change one for you and put 10 bucks in the mechanic's pocket. It will take him/her about 10 minutes at the most and you will see first hand how it is done.

- On the trinewbies.com website, you find a complete bicycle maintenance guide titled Bike Maintenance 101 – complete with detailed instructions and photographs. Use it and take care of your bike!
- Don't forget the rules of the road – ride on the extreme ride side of the road. If there is a designated bike path, stick to it (bike paths are NOT sidewalks!).
- Practice drinking while riding your bike! That's right. Before you hit the open roads, practice drinking on the bike and this includes reaching for your water bottle, taking a drink and placing the bottle back while looking forward. Do not ever take your eyes off the road when reaching for your bottle. Don't worry, you get a feel for it. I suggest practicing this while on a stationary trainer or while riding in your neighborhood. If you are riding with aerobars, do not worry about drinking while in the aero position. Take the time to sit up and drink.
- Wear the proper clothing when you are out riding and this includes real cycling shorts!
- Ride defensively. When approaching intersections, keep an eye on any cars that might be pulling out in front of you. Try to make eye contact with the driver(s) at the intersection. My advice…sit up in the saddle, hands on the handlebar and breaks and slow down until you are through the intersection. Slowing down will not hurt your training. Slowing down could save your life!

*** You will find the article ***Tips for Riding in Traffic*** in the appendix of this manual as well as the trinewbies.com website. Read it!

Running

Warm-up – whether you are returning after a long layoff from training, or you are over weight or you are just beginning an exercise routine for the first time, warming up before a run is crucial. Our goal is to get you through this program injury free and a good warm-up is the safest way to start. Here is an example of good warm-up for all of your runs:

- **5 minute walk (brisk but not hard) followed by light calf and quad stretch, then**
- **1 minute easy jog, 1 minute walk (do this twice) This will represent a 9 minute warm-up.**

During your warm-up, keep your heart rate well below your aerobic training zone. Once you begin the actual run, slowly bring your heart rate up to the lower part of your training zone.

And a good warm-down is equally as important. Once you finish your run, continue to walk until your heart rate drops to or below 100 beats per minute.

Add Walking to your Running - I recommend incorporating walking into your running as your muscles acclimate to the stresses of training for three sports. Furthermore, two-thirds of your training will involve your legs. And unlike riding a bike, running is a result of pounding your legs on the pavement. Walking will make for a nice addition to your run training allowing for less stress on the legs during the run and greater muscle recovery after the run. Obviously, your physical condition, running background, etc. will determine how you approach your run training. If you are an experienced runner, I still recommend adding walking to your long runs.

Initially, your run training in this program (after your warm-up), will start out 1 minute running, 1 minute walking. As you progress through the program, you will gradually build your time running vs. walking. Do not simply run until you are tired and then begin walking. We want to develop the run/walk from the beginning. If you are an experienced runner, you may tweak this accordingly.

During the walking portion of your run, your heart rate will probably drop back down below your training zone. That's great! That is what we want. On the run, ease back into your pace gradually bringing your heart rate back up to your aerobic zone. Do not simply take off in order to get your heart rate back into your aerobic zone a quickly as possible. Build the effort gradually.

The running distances in the program are listed by time. This will allow you to better monitor your progress.

Running tips:

- If possible, run on a grass path, or gravel path. The softer the ground, the better the shock absorption for your legs. Concrete is the worst, asphalt is next, tar is very soft (running track) with any type of dirt trail being the best. Whatever the surface, stay aerobic and you should be fine.
- If you run on the roads, try to stick to the flattest part. Unfortunately, this usually means running down the center of the road, so most of us run on one side or the other. For some, this may lead to leg or hip soreness. Why? When running on the side of the road, the natural camber of the road causes the runner to have an uneven position relative to the surface. Therefore, if you are running on the left side of the road, the left leg is forced to extend further downward than the right. You may also develop similar problems when running on the beach. So when possible, shoot for the flats.
- Stop after your designated run time! Many folks will say to themselves "I'm not stopping, I feel great!" subscribing to the no pain, no gain philosophy. WRONG! You should describe the “no pain, all gain!” philosophy. If you feel great after your designated run, you will only recover faster and feel that much better the following day.
- Find a good pair of running shoes. This is key folks. Do not simply buy the coolest looking shoe on the market. Find a reputable shoe store (a running store if possible) in your area and try on different pairs. Remember one thing: if the shoes feel even remotely uncomfortable upon trying them on, DO NOT purchase them. Do not buy a shoe thinking it will eventually stretch out. You will know if a shoe feels good or not. Once you try one on, walk around the store and see how it feels. Also, look for one with the proper support. Your less expensive running shoes, although comfortable, will not provide the support needed for your running goals. And this will include shoes in the $50- $70 dollar range (unless you catch a closeout sale of a great shoe). You will pay more for a better shoe. I think the $80 dollar range is a great place to start. You can spend up to $200 for running shoes as well. But in some cases you are buying the name and style.

Bricks

Bike/run Bricks are included in this workout for one reason only – To help your legs acclimation from cycling legs to running legs by simulating the bike to run transition. Bricks are not about proving how tough you are. A brick can be either a valuable training component or a training liability (causing overuse injuries). How you approach your brick will determine the outcome. Basically, a brick workout is a back-to-back workout to help simulate real racing. The most popular brick is the bike/run brick, which as we stated above, is performed primarily for leg acclimation from your cycling legs to your running legs. During this training program, bike/run bricks will be included during weeks 5 through 8. You will be performing one a week. Depending upon where you ride, you will need to do some preparation. Have your running gear ready to go when you finish your bike ride. This is where you want to simulate your race transition from bike to run as much as possible. During your race, you will not have a tent in which to change clothing, so you will want to cycle in the same gear you plan on running in.

On the run portion of the brick, you will only need to run for about 10 to 20 minutes (20 minutes tops!). This will provide enough time for you to make the acclimation from your cycling legs to your running legs. And do not simply take off running hard! Begin walking for about 2 minutes, then start out with an easy jog. You may notice your heart rate is higher than your typical zone. That is why walking initially will help lower it providing active recovery. Try and keep your heart rate in your zone during the run.

Brick Tips

- If possible, perform your brick transition at your home. Why? So you have a safe place to store your bike when finished. If you travel to do your cycling (like I do!) make sure you lock your bike in your car before heading out on the run!
- A stationary trainer is a great place to perform your brick workouts. It may be boring but you are assured your bike will be safe when you hop off and it allows you to bike and run in a familiar area. It will also allow you to focus solely on cycling speed work without worrying about automobile traffic.
- Plan ahead. Have everything you will want for your race. Your shoes, perhaps a running singlet (shirt), a hat, and your nutritional drink or gel. Again, you want to simulate real race conditions as much as possible.

- Practice your bike to run transition as if you were in a race. Take your time initially. Yes, speed in the transition area is important, but not right now. If you decide you want to stick with this sport, then you can worry about being competitive and focusing on time saving steps. For now, get used to bending over, slipping on your running shoes and heading out on the run.
- Begin your run with a walking warm-up. Take a sip of your drink during this time. Ease into your run. Do take off sprinting.
- Play close attention to how you feel. Yes, the first time you head out, you will probably feel awful! You will not be used to the feeling of switching from cycling to running. But you will get used to it. On your first brick be patient but take note of things that stick out. Are your legs tired? Probably, but that will improve with practice. Are you cramping? Could be you didn't drink/eat enough on your bike ride or it could be what you ate! Are you dizzy? Probably due to nutrition/hydration related. My point, take note of how you feel. In most cases, how you feel on the run portion of the brick is directly related to your nutritional consumption on the bike. And it may not necessarily be how much you consumed but what you consumed.

The Triathlon Transition

The “transitions” of the race occur between the swim and bike and the bike and run. And the better prepared you are for each event, the smoother the process. If you decide you want to stick with this sport and perhaps want to become more competitive in your age-group, the transition can be a key time-saving component to your overall triathlon performance. Because this is your first triathlon, we are not going to worry about speed in the transition at this point. However, preparation is still important.

The triathlon transition can be crazy, chaotic, and perhaps even frantic. Awareness and timing are essential. Tempers have been known to flare as tensions increase, bikes crash, and liquids are tossed about.

And the sooner you are in and out of this area, the better!

And just mention the word “transition” to someone new to the sport of triathlon and watch them become unglued.

But if you are a beginner to this sport, and you have a genuine fear of this temperamental portion of the triathlon, you are not alone. I have been there. We have all been there. And as you near your first ever triathlon, the fear is legitimate.

Perhaps it is the fear that we are going to forget a vital piece of equipment prior to the upcoming leg of the race. Or maybe it is the fear that our equipment will fail us. Whatever the reason, unfortunately, there is no magic formula for learning the art of the transition. Your only allies are time and experience. And with each race, your fears will subside as your transition skills become perfected. Eventually, the transition will become a means of strategy and your perception of this once chaotic situation will change. Eventually, the transition will become your friend. A place to hydrate, a place to put on dry clothing, perhaps even a place to relax…for a brief moment! As you become more competitive in this sport, the transition will become a crucial link in the outcome of your race and the speed at which you can transform yourself from swimmer to cyclist or cyclist to runner will become a factor in this outcome.

But let us not get ahead of ourselves. For it is the purpose of this article to show those of you who are new to the sport of triathlon, some tips and strategies to help ease your fears as you near your first triathlon.

So lets begin…

For me, the preparation begins at home, practicing the transition whenever applicable. As discussed in the "brick" section of this program, brick workouts are a great way to work on your transitions, especially your bike to run transition. It's not always the case for swim to bike, but you can still set up for that transition as well.

For the "swim to bike" transition, it is certainly possible to perform it at your local swim pool by having your bike poolside and ready to go as soon as you finish your swim workout. However, this is not a logistical (or convenient) possibility for most nor is it necessary. For all you really need to work on is stripping off your wet suit, and slipping on your bike shoes and helmet prior to your ride. And this can be done at home! And initially, you do not have to fool with putting on and slipping off your wetsuit. You can actually perform that at the pool one day (if ithe race for which you are prepping allows wetsuits). More on that later.

It is a good idea to start out practicing the swim/bike transition while your bike is on a stationary trainer. In swim/bike transition area, the triathlete is required to run or walk his/her bike to the exit point of the transition area before mounting the bicycle. Some athletes prefer to have their bike shoes already clipped to their bike pedals. Upon leaving the transition area, they push their bike while running/walking barefoot through transition area, mount their bicycle and slip their feet into their bike shoes after they begin riding. Others prefer slipping on their bike shoes as soon as they reach their bike in transition and then run/walk their bike to the mounting area. And you will find proponents for both ways believing their way is faster in transition over the other. A lot will depend on the specific transition area. If the transition area is located within a sandy, grassy area, it is usually a good idea to put the bike shoes on first. Why? Well, for one, your feet will be wet and you will most likely pick up sand on your feet as you are running barefoot to the bicycle mounting area. It will feel like you are wearing sandpaper socks as you slip your feet into your bike shoes! So, most triathletes will slip their shoes on first and then walk or run their bike to the mounting area. Also, running in bike shoes through a grassy area is much safer then running over asphalt or concrete. Running (and even walking) in your bike shoes on a hard surface can prove dangerous, as the shoes due to the cleats can be very slippery. Having said that, I have noticed most athletes prefer to put their bike

shoes on first, regardless of the surface and simply take their time as they push their bikes to the mounting area. And for the most part, the distance from your bike to the mounting area will not be that long.

So decide now, or at least prior to your brick workouts. As I mentioned, it would be a good idea to practice this on a stationary trainer. Prior to the brick workout, make sure you have all you need on your bike to simulate your race (more on that below). Then mount the bike and begin your ride. This will not be as important if you decide to wear your shoes through transition. But for those who wish to mount their bike barefooted, you will need to practice slipping your feet into your shoes as they are attached to the pedals. You will need to practice bending down, holding the bike shoe steady with your fingers and slipping your foot into your shoe using your fingers like a shoe horn…all while LOOKING FORWARD! DO NOT LOOK DOWN at your shoes! Keep your eyes on the road. Even though you are on a stationary trainer, make sure you LOOK FORWARD! Otherwise you could wind up in a serious accident.

If your race is in a climate with water temperatures below 78 degrees, you will most likely be aloud to wear a wetsuit. If you do, practice swimming in the wetsuit prior to your race. I suggest taking the wetsuit to the pool one day and spend about 30 minutes practicing with it on. This will give you a good idea what to expect prior to race day. And when you hop out of the water, practice stripping the wetsuit off . Today there are sprays that you can purchase and apply to parts of your body (ankles, wrists) that will make it easier to slip your suit on as well as stripping it off.

Now, what do you need for your bike…

First…T1 or the first Transition from swim to bike.

Grab yourself a pencil and paper and have a seat in front of your bike. Draw a line down the center of the sheet of paper creating two columns. One column will be a list of those things that will be attached to the bike located in the transition area and the other will be those items you will be responsible for upon hopping on your two-wheeler for the bicycle leg.

Now, let's work backwards.

Picture yourself on the bike during the race. What you are wearing? Are you wearing bike shorts or a swim brief? Are you wearing a heart rate monitor and strap? Are you wearing a singlet? How about your water bottles…are they full and in place?

Lets go ahead and create this list:

Column 1: Those items attached to the bike while in Transition (T1).

1. Make sure your bike is properly and securely placed on the bike rack. Some folks will rack their bike facing forward with the brakes levers hooked over the bike rack. Others will place the back of their bike seat on the rack. The choice will be yours. Just make sure the bike is secure. I have seen racers come in and knock over other bikes while attempting to grab their own.

2. Water bottles – make sure your bottles are full with the appropriate fuel and placed in the bottle cages. ½ Ironman and Ironman distance races will have water stations about every 5 miles on the bike. But for shorter races, you are responsible…so don't forget! I usually pack one filled with water and one filled with energy fuel.

3. Your helmet and sunglasses – most triathletes will place their helmet upside down on their aerobars, straps laid out and sunglasses in the helmet. First of all, practice putting on your helmet now and clipping and unclipping the strap. It is a simple task and yet, it can be a source of frustration. Preparation folks…it is an absolute necessity!

4. Bike computer and/or heart rate monitor – do you use your bike computer when you train? Then make sure it is functioning before the race. Take your front wheel and spin it to make sure the computer is responding. If it isn't, check the pick-up usually attached to lower end of the front fork. Is it close enough to the magnet attached to the spokes? If not than move it closer until you get a response on the computer. If you plan on wearing a heart rate monitor and it is attached to your handlebars, make sure it is secure and located in such a position so you can see while riding.

5. Gear/chain placement – make sure your bike is in a higher gear to start out. Perhaps with your chain on the small chainring. This will make it easier for you to begin the ride without having to grind the pedals. If your bike shoes are already attached to the pedals, spinning in the higher gears will get the bike moving forward sooner providing stability while attempting to slip your foot into the shoe. Plus, the spinning will allow you a brief warm-up for your legs. As soon as you are set and comfortable on the bike, you can switch to lower gears.

6. Make sure your components are secure. – most of your larger sanctioned races will have someone checking your handlebars and areobars before racking your bike in the transition area to make sure they are tight and safe for riding. But if you are in smaller race, you may be on your own. If everything was fine yesterday, than it should all be fine today. But if for some reason you had repairs done to your bike between your last ride and the race, make sure these components are secure and tight.

7. Emergency items/spare tires – If you are riding on clincher tires, make sure you have a spare tube or two with the tire changing tools in your seat pack. If you are riding on tubular tires, you will need a spare folded and attached to your seat. For shorter distance races, such as a sprint race, most do not bother if they flat out simply because of the time lost. But if this your first race and by golly you want to finish. So pack some spares.

8. Energy Bars – Again, for shorter distance races, liquids should be fine for nutritional supplementation, but if you plan on using bars or gels, make sure they are in a place where you can reach them. Some folks will use "non-chocolate" bars and stick pieces on their top tube for easy access. (some chocolate bars will melt and get rather messy) Some manufacturers have created handlebar packs for storing such items. And there are "gel belts" on the market for holstering gel packets primarily for the run. Whatever you use, make sure you practice using these items during your training.

9. Check Your Tires – Before you leave your bike alone and head off to the swim start…Check the air in your tires and if need be, fill them to the proper pressure. If you don't already have one, get your self a good bike pump and take it with you to the race.

10. Salve on the seat – What? You may ask. Well, this is something you do not have to do. If you are racing in a tri-brief (for men) or a women's tri outfit, you may want to put a little salve (KY or Vaseline) on the nose or tip of the saddle. I will add some comfort when you are riding. This is something I do, and you certainly do not have to.

11. Bikes shoes clipped into pedals/shoes not attached to pedals – This is probably one of the most frequently discussed topics with regards to Transition philosophy for most new to the sport of triathlon. And, unfortunately, this will be a choice you will have to make on your own. If you do decide to have your shoes attached to

the pedals, than practice this method well before the race, either on your stationary trainer or on a quiet street. Remember, while attempting to slip into your attached bike shoes, LOOK AHEAD. Do not get fixated on looking down. This could obviously lead to disastrous results. Every race will be different, so be ready to adjust your plan accordingly. The transition area for some races may be a grassy, sandy area. If this is the case, you may not want to have your shoes attached to the pedals. Otherwise your feet may be covered with sand by the time your reach the "hop-on" point of the transition. The "hop-on" point I refer to is usually that point in the transition area (usually an "exit") where the triathletes are allowed to hop on the bike and head out. Most races with larger transition areas require the riders to walk or run their bike to this point before hopping on the bike…this is obviously for safety reasons. In the case of a sandy transition area, you may want to put your bike shoes on before hopping on the bike. The distance of the race will also play a role in deciding whether your bike shoes are attached to the pedals or not. For shorter sprint races, many triathletes will have the shoes attached. However, some will have pedal adapters for running shoes. Such adapters allow the triathlete to cycle while wearing his/her running shoes, obviously saving time when hopping of the bike and prepping for the run (T2). For the longer distance triathlons, I think the "shoes to pedals" idea is really one of personal preference.

Now your bike should be prepared for your race.

Next, you may have noticed that most folks will have mapped out a small area next to their bike for those items you cannot attach to the bike. They will often have a towel spread out in a small square with various items within easy reach. So lets take a look at what makes up this area.

Column Two: Those "loose" items you need to bring to Transition:

Lets us begin with the athlete exiting the water and approaching T1 for the bike ride.

1. Dish bucket of water. Depending upon where your race is held, you may want a bucket of water sitting next to your bike…Why? You may ask. Well, if the swim portion of the race is in the ocean, you will be running up a sandy beach to get to the bike transition. Usually there are volunteers standing on land hosing down triathletes as they pass by heading for the bikes. But it is always a good idea to be safe. There is nothing more

irritating then slipping on bike shoes with sandy feet. By placing a bucket next to your bike, you simply step into the bucket and your feet are instantly rinsed and clean! Quickly towel them dry and you are ready for the ride. Your feet will thank you.

2. Heart Rate Chest Strap. Many triathletes ride the bike portion of the race with a heart rate monitor. If you do not wear a wetsuit, you will find swimming with the chest strap can be a nuisance. Have the strap out on the towel ready for you to grab. This is something you can practice at home. If you do wear a wetsuit, you can put the strap on under the suit.

3. Dry Socks. If you are racing in a longer race, you may want to wear socks for the bike ride leaving you prepared for the run. This will take extra time and for shorter races, this delay will seem long relative to the overall distance. For a ½ Ironman or Ironman, where the race will last 4-16 hours, an extra minute to slip on dry socks will be nothing. If you do wish to wear socks for the ride and/or run, towel dry your feet before putting on the socks. Otherwise, they will be difficult to slip on.

4. Spare Energy Bars or Drink - you may want a quick bite or drink before your ride or run. If so, keep some spare goodies in your gym bag. In fact, make sure you keep such items in the gym bag, because the heat will warm the food and drink up rather quickly.

5. Running shoes. Upon getting off the bike and preparing for the run (T2 or Transition 2) You will want your running shoes right there!

6. Running hat and accessories - If it is hot and sunny by the start of the run portion of the race, you may want to wear a hat. You may also want to slap on some sunscreen. I like to have a spare pair of sunglasses for the run. Usually, by the end of the bike ride, my cycling “shades” are usually covered in forehead sweat/water etc. So, I like to put on a clean pair for the run. This of coarse is optional and is up to each individual. You will eventually learn what works best for you.

And that just about covers it. Of coarse this is just a generic list of items and over time you may develop your own set of items for a successful Transition. Just remember, if you are a beginner, do not be afraid of the Transition area. Take your time on your first couple of races. Find out what works for you, what items

you may or may not need for your race and then as you begin to focus on speed with each race, you can tweak the look of your Transition Area accordingly.

Weight Training Program

I suggest you perform some type of weight or strength training at least 2 days per week and no more than 3. Below, you will find a complete circuit training workout with photos. This program is also located on the trinewbies.com website. You will perform 2 sets of 15 reps per exercise. Keep the weights light. You do not want to build bulk. You want to build strength for endurance. You may feel sluggish the first couple of weeks but it will get better.

The following program is designed for the triathlete on or off season. The program consists of 14 exercises and emphasizes lifting lighter weights with higher reps. For each exercise, you will complete 2 sets of 15 repetitions. Ideally, you would want to lift three times per week. However, twice a week is perfectly fine, especially during the triathlon season (usually April thru November). The program consists of photo illustrations to help demonstrate each exercise.

For triathletes, there is a real need to develop our strength to help prevent injury and to further enhance our endurance. However, we are also faced with the fear of gaining weight in the form of muscle mass. By emphasizing lighter weights and more repetitions you will be adding strength (and some muscle mass) and burning more fat creating a lean body. Initially, **START OUT WITH VERY LITTLE WEIGHT!** That's right! We are not here to compete against the body builders in our gym. Leave your ego behind. The key is to maintain proper form when lifting. Too much weight causes us to "throw" the weights in our favor. By lifting light, you can control your motion and maintain proper form. If lifting weights is new to you, find someone qualified, such as a personal trainer, to walk you through the exercises to make sure you are performing them correctly. Once you feel comfortable, than you can progress on your own.

Finally, **BE CAREFUL! TAKE YOUR TIME AND DO NOT RUSH THROUGH THE EXERCISES.** Injuries are very real in the weight room and are usually the result of carelessness and/or lifting too much weight. Do not race through your routine and KEEP THINGS LIGHT!

On the following page is the list of 14 exercises that will be used to help build strength and endurance. You can use these exercises and program throughout your triathlon season as well as the off season. I used it while training for Ironman Florida in 2001 and it worked great! Furthermore I lifted twice per week.

Lat Pulldown
Leg Extension
Bench Press
Leg Curl
Dumbbell Pullover
Inclined Press
Bicep Curl
Tricep Pushdown
Supinated Bicep Curls
Squats
Upright Rows
Side Lateral Raises
Calf Raises
Abdominals

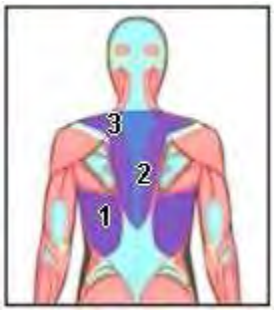
I recommend moving up in weight about once every two weeks or so. You don't have to add much. Just keep the challenge up. Remember, maintaining proper form is key. Especially if you are fatigued. The more tired you are, the greater the odds for an injury. Be safe and if you have to drop some in weight to maintain form, then do so.

In the appendix of this program, you will find a template that you may copy or cut out for your weight training. If you have any questions, feel free to email me at hazen@trinewbies.com.

Lat Pulldowns

Works the (1)Lats (latisimus Dorsi) (2) Rhomboids and (3) Trapezious Muscles

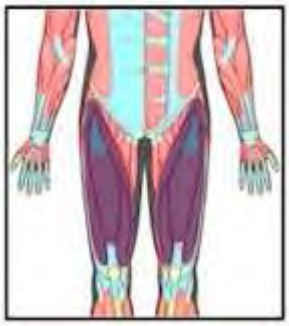
Lat pulldowns have changed over the years. In the past, the lat pulldown was performed by pulling the bar behind the head to the shoulders. However, it was found that biomechanically, this was not a natural movement and could cause injury to the shoulder area as well as excess strain on the upper spine and neck. You can gain the same benefits by performing the lat pulldown in front of the head.



1) Start out with a light weight. Remember, we are working on form and technique.
2) Be seated, facing the machine and adjust the seat and roller (the part of the machine that fits over the top of your quads.) Make sure the roller is snug but comfortable. (photo 1). Now, stand up and grab the lat bar in a manner that is comfortable to you. For smaller individuals the handles on the bar may be too wide. Find that comfort zone before beginning. Make sure both arms are equal distance from the ends for maximum balance.
3) Now, sit back down while holding the lat bar, arms extended making sure you are in a secure position (photo 2)
4) Once seated, and upon pulling the weight down, you will slightly backwards pulling the lat bar to the top of the chest, between the collar bone and the chest area (photo 4). Pay attention and be careful. Never have the bar in a position underneath your chin. Lean back far enough for the lat bar to clear you face.
5) Pull down for a 2 second count and let the the arms up for a four count.

Leg Extension

Works the quads or quadriceps

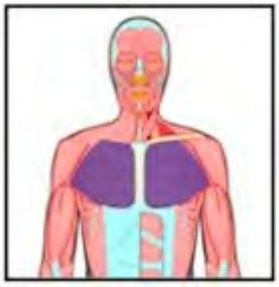


In many cases, certain parts of our body are not balanced regarding muscles strength. And I refer to our legs and arms. We tend to favor our good arm or leg when lifting weights. The best way to overcome this is working each seperately until both are equal in strength. If possible, use a leg extension machine that allows single leg lifts. Otherwise, using both is perfectly fine.
IMPORTANT: If you feel any pain in your knee at all, STOP and seek advice from a qualified person in your gym. Again, another reason to avoid lifting heavy weights.

1) Sit comfortably in the seat. Make sure your legs naturally bend at the end of the seat and your back is flush to the back of the seat. If not, make the necessary adjustments. Some machines will have a seat adjustment; others will have an extra pad to place behind the back.
2) Placing your legs in the appropriate position (either double or single leg machines) and lift with a 2 second count, lowering your legs to a four second count. Do not lock your knees on when your leg is fully extended. Keep a slight bend in the knee.

Bench Press

Works the chest or pectorals



When performing the Bench Press, remember, your typical bar weights 45 pounds. For some, the bar may be too heavy. No problem. If that is the case, reach for a pair of dumbbels and find a weight that is comfortable and light. Using dumbbells will insure balanced lifting. Again, do not use too much weight and do not be intimidated by others in the gym lifting heavy weights. Stick to your plan. Many individuals use a "spotter" because they are lifting heavy weights. If you require a spotter for this reason, then you are lifting too much! However, in the beginning, a spotter may be helpful to insure you are using proper form. Remember, you want a weight (or weights) you can control.

1) Lay on the bench facing upwards. If you cannot place your feet on the ground while lying on your back, bring your feet to the bench. It is important to keep your back flat (photo 2)
2) At this point, you should have determined if the bench bar is too heavy. If no, while on your back, grab the bar about shoulder length apart. If you look closely, you will notice that the bar will a rough "grip" area on each side. Using the grips as a guide, place your hands equal distance on both sides to insure proper balance. (photo 1)
3) Lift the bar off the bench stand - arms extended directly above your chest (photo 3). Lower the bar on a four second count and raise it on a two count. On the downward portion, let the bar barely touch your chest then lift again (photo 4). Guys (hopefully ladies!) DO NOT BOUNCE THE BAR OFF YOUR CHEST and do not lock your elbows when your arms are extended.

DUMBBELL BENCH PRESS:
1) If you are using dumbbells, follow step one.
2) Once on your back, start with the dumbbells extended above your chest.
3) Lower the dumbbells together (keeping your arms even throughout the entire range of motion) on a four count and raise them on a two count. Make sure you control the dumbbells. Proper form in key! (photos 5 & 6)

Leg Curl

Works the hamstrings

The Leg Curl is one exercise that can be performed in a variety of ways. And I have seen a variety of leg curl machines throughtout my years of training. Some require standing, others lying on your stomach, some sitting down and in a pinch, you can strap on an ankle weight and your perform the leg curl in the comfort of your living room!

1) In our example, the leg curl is performed on a classic machine. You are on your stomach, pulling your ankles towards your buttocks. You are pulling for a two second count and releasing for a four second count. You will have some type of support to grab while pulling.
2) Make sure you are able to move the legs for the full range of motion without stress or too much body movement.

Dumbbell Pullover

Works the Pectorals and Lats

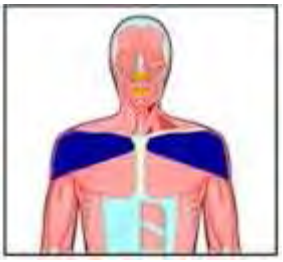
When choosing the correct weight, make sure you choose a weight that allows you proper handling. You will be lifting this weight over your head and you do not want it to slip. Make sure your dumbbell allows for a good grip. Also, if you perform this exercise carelessly, you could injury shoulders, so be careful. Make sure that here is no added strain. Only lower the dumbbell as far as it is comfortable.

1) You will be performing this exercise on a flat bench.
2) Lie on your back with your head at the edge of the bench.
3) Hold the weight in your hands, arms extended above your chest. Try to keep your wrists and arms from flexing. Do not lock your elbow. Lower the arms on a four count and bring them up on a two count.

Inclined Press

Works upper Pectorals and Anterior Deltoids

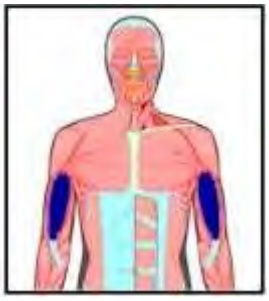
The inclined press can be performed with either a bar or set of dumbells. If you use a standard bar, it will weight 45 pounds. I prefer the dumbbells. I suggest using the dumbbells for two reasons: 1) It will allow you to start at a lower, more comfortable weight and 2) You will develop your muscles evenly. Remember, choose a light weight.



1) When performing the inclined press, choose a weight that is light and comfortable.
2) Sit on an incline bench with incline below 45 degrees or a little higher than half way. Sit back on the bench. Do not lift your head.
3) Lift the weights to above your shoulders, arms extended. Do not lock your elbows.
4) Lower the weights on a four count and raise them on a two count.

Bicep Curls

Works the biceps



The Bicep Curls will be performed on an inclined, seated bench. In fact, you can use the same bench as you did for the Inclined Press. The purpose of sitting while doing the curls is to keep you from cheating yourself. Many folks will perform the bicep curl standing up. Once they fatigue, they tend to rock their body, thus using the body to help lift or "throw" the weights up. This serves little purpose. By sitting at an incline, your back is flat, your arms hang free and you can really concentrate on the bicep with both range of motions. Remember, choose a weight light enough to get you through the entire set without cheating.

1) While seated, lower the arms so they hang naturally. Holding the dumbbells, make sure each arm is turned so the fist and underside of the arm facing forward.
2) Keeping your elbows steady, lift the dumbbells evenly on a two count and lower them on a four count.
3) It is important to keep your elbows in place. That is also why its a good idea to choose a weight light enough to perform the exercise correctly.

Tricep Pushdown

Works the triceps

When performing the Tricep Pushdown, your form is very important. This exercise can be performed on a machine or with dumbbells. When using the machine, use the rope attachment with two handles on the end. The rope will allow you more of "pull-through" motion simulating a swim stroke. When facing the machine, stand with your feet either side by side or one step in front of the other. In either case, lean forward just a bit to allow unabstructed movement of the bar. KEEP YOUR ELBOWS by your side and do not move them during the exercise. If using dumbbells, you will be performing this kneeling with one knee on a flat bench.

ON A MACHINE

1) Face the machine. Grip the rope taking the bottom of the rope in either hand. Keep your elbows bent just past 90 degrees (see top photo).
2) Keep your elbows by your side during the full range of motion.
3) Push the weight down on a two second count and let it rise on a four count. Let your amrs come up just past 90 degrees before pushing down again.

TRICEP WITH DUMBBELLS

1) Working the left arm first, place the dumbbell in your left hand.
2) Choose a light weight that you can work with. Form is very important. As you improve, you can add weight.
3) Place your right knee on the bench, left leg flat on the ground, knee slightly bent (see photo below). Lean forward on the bench using your right hand for support. Your back should be as flat as possible.
4) Hold the weight in your left hand, bend the elbow 90 degrees so your upper arm is parallel with your body and your lower arm is facing down.
5) Keep your upper arm level and steady, push the lower arm back until it is level with the upper arm. Do this on a two count. Then lower the arm back towards the ground on a four count.
6) DO NOT SWING YOUR ARM. Often times, we tend to get into a rhythm and start swinging our arm backwards and forward. This is cheating! And could lead to injury.
7) After completing your reps, repeat the same steps with the right arm.

Supinated Bicep Curl

Works the biceps

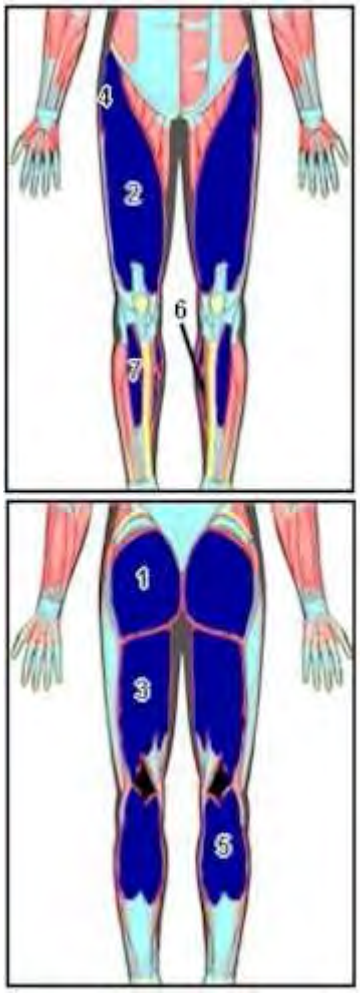
You will including this exercise along with the regular bicep curl. Sit on a flat bench with your back upright. You will not be doing these leaning back. Make sure to choose a light weight to insure proper form. You will be alternating arms on this exercise so take your time. The tendancy will be to hurry through these. However, maintain a slow, steady pace for optimal physical benefits.

ON A MACHINE

1) You will doing this exercise on a flat bench, sitting upright.
2) Choose a weight light enough to insure proper form and optimal physical benefit.
3) Start with one arm down by your side, the other in the "up" position. You will be alternation these. While bringing one arm up, you will be lowering the other arm.
4) Do not get into a "swinging" rhythm. Keep your back straight and your arms steady.
5) One repetition equals the upward and downward movement of both arms.

Squats

Works most of the larger muscles of the lower body. (1) Glutes, (2) Quads, (3) Hamstrings, (4) Hip Muscles, (5) Gastrocnemius, (6) Soleus, (7) Tibialis Anterior



IMPORTANT: If you are unfamiliar with this exercise, I recommend practicing your form without any weight and with a trained professional. If you are currently experiencing any knee or lower back pain, then DO NOT attempt this exercise. If have experienced pain in these areas in the past, then start the exercise without any weight to see if any pain develops during the range of motion. Also, when performing the downward portion of the squat, and as your knees are bent, do not let the knees extend beyond your ankles. I suggest performing this exercise in front of a mirror in order to check your form.

The squats can be performed with a bar or dumbbell. The bar alone weights 45 lbs, so if this is too much weight, use dumbbells. In either case, proper form is important. If using the bar, use a squat machine if possible. The bar can be placed high enough to keep you from too much strain placing it on your shoulders. Most gyms will have a pad with will wrap around the weight for neck comfort. If the is none, use a small towel around your neck. If using dumbbells, you will be placing them on either shoulder holding them steady with your hand. Consult a professional before attempting the squat and be very careful. You do want to injure your lower back. Too much weith can be detrimental if the exercise is not performed correctly. If you are experiencing any knee or lower back problems, I recommend not using any weight and practice the motion to see if pain occurs. You can gradually add weight once you begin to get stronger.

Continued on next page…

Squats continued from previous page…

SQUATS WITH BAR:
1) Start by facing the bar with your feet shoulder-width apart. Grip the bar with both hands. Make sure your hands are placed equal distance apart and in a comfortable position. Step under the bar and stand with the bar resting on your shoulders just below the neck line. DO NOT REST THE BAR ON YOUR NECK.
2) Once in the standing positon, do not lock your knees. Keep them slightly flexed.
3) Do not put your body weight on your toes. Try distributing the weight to the midsole and heels.
4) Slowly lower your body, bending at the hips leaning forward slightly. As you lower yourself, imagine sitting back in a chair. Balance is important. Only go as low as comfortable. As you get stronger and your muscles become more flexible you will be able to squat a little lower.
5) Lower yourself on a four count and stand on a 2 count. Remember, when standing, do not lock your knees. Keep them slightly flexed.

SQUATS WITH DUMBBELL
1) Place the dumbbells on your shoulders. Facing forward, keep legs shoulder width apart.
2) Follow steps #2 - #5 from the explanation above.

Upright Row

Works (1) deltoids and (2) upper trapezius

This exercise can be performed with a bar or dumbbells. You can either use a 15 lb. curl bar, the 45 lb.. Olympic bar or the necessary dumbbells. I prefer the dumbbells. But a curl bar will work well too. If you use a curl bar, and you add weight, make sure to secure the weights safely to the bar. Also, be careful on the upright row. Do not rush these. I have exerienced some shoulder pain in the past, so make sure to choose a light weight when starting out and take your time. Remember, correct form is key.

1) Choose a weight that is comfortable. Start out with your ams in front of you, holding the dumbbells at your thighs. Keep your knees slightly flexed.
2) With your knuckles facing down, lift the weight to just below your chin. Your elbows should be pointed outward as you lift and at eye level. Keep your wrist flexible. If you develop any shoulder pain, do not raise the dumbbells as hight.
3) Lift on a two count, lower the weights on a four count.

Side Lateral Raises

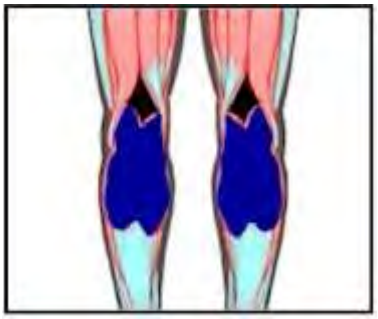
Works the medial deltoids

When performing this exercise, start out with little or no weight. Its a touch one, and a good one! I start out with 3 lbs in each hand. Do these correctly and take your time. These are designed to help build your shoulders so be careful and work slowly.

1) Start out with dumbbells in hand, sitting on the bench. Face a mirror so you can make sure your form is correct.
2) Hang your arms by your side, fists turned inwards. Keep your arms steady and firm.
3) Lift your arms wide, keeping your arms steady until the weights are even with your shoulder. Your arms should be extended outwards, fist should be facing down towards the ground.
4) At this point, rotate your arms inward until your fists are pointed upwards toward the ceiling.
5) Bring your arms together above your head similar to a jumping jack.
6) Lower the arms back to the wide position. Rotate arms so fistas are pointed down. Then lower your arms to your side.
7) The entire movement represents one repetition.

Calf Raises

Works the calf muscles - the (1) soleus and (2) gastrocnemius



Calf raises can be performed in three ways depending upon the machines available at your gym or home. The three ways are (1)sitting calf machine, (2) standing calf machine, or (3) standing on a ledge. When performing calf raises, take your time. Do not hurry these and DO NOT BOUNCE! This could put excess stress on the achilles tendon and cause injury. Also, do not drop too low on the downward portion of the exercise. Again, this can put a great deal of stress on the achilles.

THE FOLLOWING PHOTOS REPRESENT USE OF A SITTING CALF MACHINE AND STANDING ON A LEDGE.

SITTING CALF MACHINE

1) Find a light weight that is comfortable. The sitting calf machine will have a roller which tightens down over your knees, similar to the Lat Pulldown. Place the balls of your feet correctly on the foot pad. Then lower the roller over your knees. Find a position that is snug but comfortable.

2) Lif up with your toes and release the safety lever on teh weight machine. Then perform the exercise. Lower your heels on a 4 count and raise up on your toes on a two count. Remember, DO NOT BOUNCE.

STANDING CALF RAISE ON LEDGE

1) This calf raise is performed on a ledge or step. Place the balls of your feet correctly on the ledge.

2) You will work one foot at a time. Place the other foot around the back of the foot you are working. Lower your heel on a four count and raise up on your toes on a two count. DO NOT BOUNCE. When you finish with one leg, switch to the other.

3) Once you gain some strength, you can add weight. This is done by simply grabbing a weight or dumbbell and holding in hte hand of the same leg you are working.

Abdominals

There are a variety of Ab exercises that many of us perform in the gym or at home. My first recommendation would be the crunch. And there a number of videos, shows on television, etc. that show how to perform the crunch properly. I will leave the ab work up to you.

IMPORTANT NOTE: Never pull on your head or neck when lifting. You only need to lift as high as it takes to lift your shoulders off the ground. When lifting, lift with your abs, not your arms pulling on your head.

BASIC CRUNCH
1) Lie on your back, knees bent, feet flat on the ground.
2) Place your hands behind your head, barely touching your head. The hands are used for support only.
3) Lift with your abs adn bring the shoulders just off the ground.
4) When lifting, look towards the ceiling and point your chin towards the ceiling or place a tennis ball under your chin when lifting. The key is to keep the head steady.
5) Remember, DO NOT bend your neck, or pull on your head with your hands. The hands are their to help support the head when you lift.
There are a variety of crunches you can perform and many of you may have a series of crunches you already perform. Whatever the exercise, always remember...DO NOT PULL ON YOUR HEAD OR NECK WHEN SITTING UP.

Nutrition

Daily diet:

IMPORTANT – If you have any specific health concerns (diabetes, over weight, etc) please consult your doctor and let him/her know of your fitness goals and discuss your dietary needs.

The key to a healthy daily diet is to provide the necessary fuel for your body so that you can perform your daily activities at an optimal level. A healthy diet helps fuel vital parts of the body such as your muscles, your bones and your brain just to name a few. It also helps maintain your blood sugar levels and helps boost your immune system so you can remain healthy throughout the day.

Now that you have added triathlon training to your daily activities, you must fuel your body for both your regular daily activities as well as your training. Initially, your training will not take up too much of your daily time and your calorie consumption will not be as high. However, as you progress through the program, your training hours will increase. Thus you will be burning more calories during the day and you will need to supply your body with the adequate fuel in order to handle the workload.

Training on an empty stomach (i.e. first thing in the morning) may seem like a great way to loose unnecessary pounds at first, but it is actually very unhealthy. Eating a balanced diet (including three meals a day) is vital to your health, your daily performance on the job and your triathlon training. Routinely skipping a meal will negatively affect all three! Maybe not initially for some, but definitely in the long run. With regards to your triathlon training, an imbalanced diet will ultimately defeat your purpose for training. It's like going for a run, then lighting up a cigarette.

Many individuals new to the fitness lifestyle think that a diet based around training is solely for performance – whether it be a specific daily training ride or run or ultimately your race later on down the road. And while taking in calories and a balanced mixture of carbohydrates, proteins and fats as well as other nutrients are certainly key to performance, you must also think long term. And I refer specifically to your recovery from your training as well. Eating for recovery is as crucial as eating for performance. In other words, what you eat today (before and after your training) will not only help the today's activities, but will actually help you perform these activities better tomorrow! And as you continue this habit, your body will become stronger and more productive.

Once you get into your training, you may experience different needs for nutrition. Believe it or not, some folks actually loose their appetite, while others grow very hungry. If you do not feel hungry for a particular meal that day, it is important that you still eat! Also remember, training does not give you the green light to eat junk food! Be smart and treat your body right! Keep your meals balanced. And for each meal, eat until you feel satisfied, NOT until you are full or stuffed! Eat slowly and chew your food.

There are several good books out on the market regarding triathlon nutrition or general sports nutrition. I highly recommend Chris Carmichael's ***Food for Fitness.*** Hey, if it works for Lance Armstrong…! It is an easy read and packed with great information covering your daily nutrition based on your particular weight and how much you train. He discusses good foods and bad foods, fast foods and more. It covers how to, when to and what to eat or drink before, during and after your training. It also includes meals plans, recipes plus much, much more. There are others as well:

> **Sports Nutrition Guide** *by Michael Colgan*
> New Research, New Findings, New Nutritional Strategies! For both serious athletes, or for those engaged in recreational athletic activities, optimum performance can be achieved through the very latest scientific research available today! Written in a no-nonsence, entertaining and east-to-understand style, this book shows all athletes how to customize their own personal nutrition program. Fully referenced and complete with tables, charts, photographs and illustrations, readers will discover the secrets of how nutrition, vitamins, minerals and antioxidants greatly impact all athletic endeavors -and what they absolutely must know to attain and maintain the competitive edge.
>
> **Dynamic Nutrition for Maximum Performance**
> *by Daniel Gasteu and Fred Hatfield*
> Designed for anyone with an interest in sports nutrition, this book is a complete easy-to-use guide to today's sports nutrition. It is intended to help you achieve and maintain maximum levels of fitness and performance through sport specific dietary intake and nutritional supplementation.

Nutrition for Racing and Training: The bulk of your fuel during training and racing will take place on the bicycle. You are on the bike longer than the other two sports, and obviously there are no water breaks during the swim! While on the bike, your nutritional intake will serve two very important purposes : 1) you will satisfying your immediate nutritional needs and 2) you will be preparing

yourself for the upcoming run. And the best way to test your nutritional intake on the bicycle will be your bike/run "brick" workout.

Hydration is crucial. Whether racing or training, once you begin to get thirsty, that is a sign that dehydration has already set in! So prevention is key. During your bicycle training or longer runs (your 45, 50 and 60 minute runs), I suggest drinking on timed intervals. On the bike, use the alarm on your wristwatch to let you know its time to drink, eat or consume a gel. I suggest taking in about 2 oz. of liquid every 5 minutes while on the bicycle, especially in hotter climates. This will keep you hydrated throughout the ride and if you spend a good portion of your ride in the aero position, this will allow you the opportunity to sit up and stretch your back. For your longer runs, practice taking in about 4 oz of liquid or gel every 8 to 15 minutes. Use the walking portion of your runs to consume your nutrition. For your shorter runs (20 minutes or so), don't worry so much about what you take in during the run. What you eat before the run will be important. A nutritional bar and about 10 oz. of a sports drink 60 minutes prior to your shorter runs (those runs 30 minutes or less) should be fine. On the bike, take along some water if your ride is 30 minutes or less. Take a bottle of water with you while you are swimming and keep in on the deck above your lane. You can become dehydrated in the pool too!

As your training progresses, so will your distances and your overall training time per event. And this will begin to occur by week three. You will want to find a nutritional drink that you like by this point. There are plenty on the market. And try to simulate your race by practicing taking in your nutrition:

> **During Your Run Training:** You will want to drink during the walk portion of your run. But do so while you are moving. You may consider purchasing a nutrition belt such as a Fuel Belt™ (www.fuelbelt.com) that carries smaller bottles for liquids and gels. Practice taking in your nutrition every 8-15 minutes. Do this during the walking portion of your running.
>
> **During Your Bicycle Training:** get used to reaching for your water bottle, drinking and putting it back in the water bottle cage. Take your time and do this while looking forward, keeping your eyes on the road! Do not ever take your eyes off the road. If you have a stationary bike trainer, practice on the trainer first.
>
> **During Your Swim Training:** again, keep a water bottle poolside while you train. And drink as often as you wish.

There are a couple of general rules of thumb to follow regarding nutritional intake during your training and racing. One is your carbohydrate intake. You want to

consume 30-60 grams of carbohydrate per hour. However, this is a rather large window isn't it! So, for the early part of the training program, start on the low end, closer to 30 grams (a little more won't hurt you. Just try to keep it close to 30 grams.) As you begin to increase your distances, begin to take in more. The type of nutrition you take in and what your body (digestion) can handle is up to you. And this is what YOU will need to practice. Some individuals prefer liquids only. Others use a combination of gels and liquids. Still, others take in solid food with their drink. You will need to practice to determine what works for you. Your "brick" workout will be a good way to assess your nutritional intake. Remember, we are training to race and what you do in training should be carried over to your racing.

Rarely in a sprint triathlon, do they pass out nutritional drinks during the bike ride. For the run, the race volunteers will usually pass out small cups of water (sometimes a nutritional drink mix). So you will be fine taking along your favorite drink on the bike. If you want to take along a water bottle of your favorite drink on the run, no problem! Have it waiting in transition.

Race Day Nutrition – Just how much should you eat prior to your race and when should you eat? This is always a be big concern for most folks preparing for their first triathlon. And understandably so. However, it is not complicated. First of all, there is no set standard on carb/calorie intake prior to a race. Nutritionists and the "experts" give us a broad range of how many carbs/calories to ingest and when the morning of a race but this range is so broad, it still leaves the individual somewhat confused. In reality, YOU are the only one who can determine what to eat and how much. Now, how do you figure this out? Start testing during your training program. Before your Wednesday brick (if you perform the workout first thing in the morning) or before your long bike or run on the weekend, begin a "routine." Practice waking up early, test your nutrition and then assess your performance that morning. And the only way to test this, is to perform the same routine, at the same time each week. And remember, you can only test one variable at time.

For example:

1. Pick a day to practice your pre-race routine. If possible, your Wednesday "brick" would be a good choice. However, you must perform the test in the morning. So if you do not perform your Wednesday brick first thing in the morning, your weekend long run or bike will also prove helpful.
2. In most cases, your race will begin about 7:00 or 7:30. So I suggest getting up at about 5:00 (a couple hours before). The earlier the better.
3. Consume some carbohydrates. Eat a bagel with some peanut butter, perhaps a homemade carbo-based smoothie (no doughnuts!), or maybe an energy bar or two…something with some complex carbs. Then let that digest and head out on your training activity. And pay attention to how you

feel. Did you eat enough? Did you eat too much? Only you can decide and practice is the only way to help you learn what works best for you.

4. Keep in mind, what you eat the night before is also important! This is all part of your nutritional pre-race routine.

Part 4: Appendix

Thinking About Doing A TRI?
Hazen Kent

So, you are thinking about doing a triathlon.

What is it that has motivated you?

Is it personal pride, the physical challenge, the thrill of competition?

Perhaps you were flipping the channels one Fall Saturday afternoon and became mesmerized by a bunch of crazy people swimming, biking and running for an entire day while vacationing on some beautiful tropical island. Maybe you were out picking up the morning paper and saw your neighbor heading out for a bike ride. Or did you attend a local triathlon in your area and notice the wide mouthed grins on the faces of the racers as they crossed the finish line?

Whatever the reason, all I have to say is…

EXCELLENT and CONGRATULATIONS!

But be careful…

This triathlon thing is a like a poisonous bug…if you aren't careful, it will bite you. And the poison once in your system is like an addictive elixir. You may never want to quit!

But where do I begin?

Let's take a look.

The Think Tank

Now comes the time for you to seriously consider what lies ahead. Now you must sit down with yourself and think about the reality of what it will take for you to be one of those smiling, satisfied human beings crossing the finish line.

To begin with, ask yourself some questions that are tied directly to your home.

Are you married? Do you have kids? What is your daily work schedule? Do you work full time outside the home or do you work full time in the home?

If you are married, you owe it to your mate to discuss this with him/her. Sit down with your partner and discuss the reality of doing a TRI. Of coarse, the initial conversation can be very encouraging. But understand one thing, neither you nor your partner really knows the type of commitment training for a triathlon takes…physically, emotionally and yes, financially.

Physically, you have your own mind, body and sole to think about. Training for triathlons takes commitment, hard work (it will seem so at first) good conditioning, quality time and oh yea, did I mention commitment?

Emotionally, you have to deal with fatigue, mental letdowns, outside responsibilities, last minute interruptions to your training program and of coarse the good times too!

Financially, the expenses can become overwhelming. You've got running shoes, cycling shoes, running and cycling apparel, a bicycle, swim suits, goggles, gym fees and pool fees…and yes they all add up.

If you have children, write out a schedule that includes your training and daily responsibilities, with which you and your partner can work and live. And assume you are doing this for the long haul. Anyone can be accommodative for one event. But after that first triathlon, what happens if you love it so much you want to continue? Patience on your partner's part may be short lived. And let's not forget…your partner can always train with you!

And of coarse, if you are single with children, the scheduling can be even tougher.

But it can be done.

And finally, if you are single, with no children, than you have NO EXCUSES.

I am not here to discourage you, but rather let you know some of the basic facts that go along with triathlon training and racing. But remember, there are folks just like you who have considered these very things, have set out on this very journey and wound up loving it!

Getting Down to Business

First things first…

Before you take another step…you need a goal. Something to shoot for…something to keep you motivated.

To begin, I suggest you choose a particular triathlon preferably close to home. Research the various triathlon magazines or search the Internet for a calendar of races in your area.

Choose a Race: My first recommendation would be to choose a Sprint Distance Triathlon. Determine the time between now and race day and give yourself enough

time to adjust to your new training regimen. And set aside enough time to provide for a safe, injury free training period. Furthermore, do not rush your training. I would not schedule a race any sooner than 10 weeks out. And the farther out, the better. Below is a break down of the distances covered in a Sprint Distance Triathlon.

The Sprint Distance Triathlon:
Swim: ¼ mile = 400 - 500 yards(meters)
Bike: 9 – 15 miles
Run: 5K or 3.1 miles

There will always be variations in the distances of a Sprint Tri, but most will be pretty close to those listed aboveOnce you have decided on a race, sit down and map out a training schedule to fit your daily routine.

The first thing to determine when training for a triathlon is - when will you do your training? If you work full time, you will have to create a training schedule compatible with your work schedule. Depending on your athletic background, no longer will your training consist of simply heading out for a run, driving to the pool for a swim or hopping on your bike for an afternoon ride. You must now combine all three sports as part of your training regimen and perhaps even some strength training in the weight room(primarily for strength and endurance).

And you must understand, the majority of your training will consume most of your "one time" *free time*.

Believe me, this will test your commitment. But like I said, most of the folks in this crazy sport are in the same boat, and somehow *we* all find a way.

I do not know what your goals are regarding triathlon but we can break that down into two basic categories:

a. To finish the race
b. To be competitive in the race.

Because it is your first race, I am guessing your main goal is to finish the race and hopefully with a smile on your face! If you decide you love this sport, you will find there are plenty of triathlons out there for you to participate in and if so desired, you can adjust and build your training program around a more competitive performance.

If you decide to become more competitive in your racing, your training will probably become more advanced. Your training program would have to be more organized and well planned. If you decide you want to stick with this sport, then you really must learn to train with patience. Burnout, excess fatigue, injuries and ultimately frustration can develop due to over training, and a discipline, conservative training regimen is absolutely necessary.

The Toys!

Now comes the fun part…coughing up the greenbacks! The first thing to determine is what do you currently possess regarding equipment, training aids, etc and what will you need to purchase? Below is a basic list of those items necessary for training and competition in the sport of triathlon:

The Swim

1. Competitive Swim Suit (usually made of lycra). A swim brief is not a must in the beginning. Any swimsuit will do. Guys, you may feel uncomfortable wearing a men's swimming brief, but if you choose to become more competitive in this sport, a quality suit is crucial to your training. For the ladies, the choices are many, especially regarding racing apparel, so do some research and find out what is best for you.
2. Goggles and bathing cap. You will be racing in a cap, so wearing one may help you get used to it. For ladies and long-haired guys, you will want a cap to keep the hair out of your eyes while swimming. Get a rubber cap, not lycra.
3. (Optional) A kick board, pull buoy and paddles. If you swim with a masters program or at your local pool facility, these items will probably be available. If they are not and you do decide to stick with this sport, I would consider making the purchase.

The Bike:

A Bicycle - at this point, do not concern yourself with purchasing a new bicycle. Any bike with gears will be fine. In fact, many of today's Sprint races have a "fat tire" division for those with mountain bikes, hybrids et.al. It is important, however, to have a bike that fits your body.

2. Bike Shoes. Again, if you decide to stick with this sport, you will need a pair of bike shoes. For your first race, however, you can cycle in your running shoes. Make sure the bike pedals on your bicycle do not require specific cycling shoes. If they do, you will have to make a decision…either purchase different pedals or invest in some bike shoes. If your bike does have cycling specific pedals, I recommend having them switched out for a pair of basic pedals with a toe clip. A new pair of bike shoes can run you between $100-300. Where as, a set of standard pedals would probably only set you back about $30 (maybe less!). The bike shop will be able to change them out in a matter of minutes.
3. Cycling apparel. I do recommend purchasing a couple pairs of cycling shorts for your training. Your derriere will be glad you did. Visit your local bike shop or search the Internet
4. Cycling Computer. A cycling computer will be helpful with your training in determining your speeds and distances. But it is not a necessity. And there are many on the market. If you want one, find the most basic and least expensive.
5. Water bottles and Repair Equipment. Water is vital! You will need water bottles (and bottle cages) for your bicycle. Having spare equipment will do you little good if you do not know how to change a tire. Especially if you are training alone. And always take along some money for a phone call(s) in the event you are left stranded. I have flatted out twice on one ride and all my spares were used up. One phone call, and 15 minutes later, a friend was there to pick me up. For now, I suggest you cycle close to home or with a partner. But for most of us, cycling close to home often means cycling in busier traffic so always cycle with caution.

The Run:

1. A good pair of running shoes. This is very important. If at all possible, try to purchase your first pair from a knowledge source. That is someone who can look at your feet and determine what you may need. Good shoes are important. If there is a running specific store in your area…use it! Even if the shoes are expensive. Once you find a pair you love, then you can order online all day long and really save.
2. Comfortable Apparel. This includes comfortable and weather appropriate clothing. 3. Cap. If the sun is hot, a good cap is a plus to shade your face. Find one made with mesh. This will allow heat from your head to pass through.

Accessories:

1.Heart Rate Monitor. Once you decide you want to stick with this sport, invest in a Heart Rate Monitor. It will wind up being your favorite training partner.
2. Wetsuit. Again, if you decide to stick with the sport, you will want to invest in a wetsuit as well. Now, for those of you living in areas where the waters remain chilly throughout the Spring and Summer you may want to consider wearing a

wetsuit from the get go. But before you buy, see if you can borrow. Do not purchase a Dive suit or Surfing wetsuit. The material is much thicker and suits tend to be looser fitting. A Triathlon wetsuit is light and basically skin tight and allows for terrific mobility.

One + One + One = One

I want to emphasize that even though you may excel in one particular sport (swim, bike or run), it is important to balance all three activities when training. If you are a runner, for example, you will have an advantage over most of the triathletes during your race, as long as you have not wasted yourself on the swim and bike. Because your race performance will be a direct result of your training, a balanced training program is necessary. Once you add two additional sports to your training regimen, your specialty may actually suffer a bit, at least in the beginning. Remember, two of the three events in triathlon – the bike and run - put a great deal of stress on the legs, so again, balance is the key to preventing over training and ultimately injuries.

Now let's discuss each event as they exist in a traditional triathlon.

The Swim: Without going into the specifics of "How to Swim", and not knowing your swimming background, I do have a few suggestions. If you are having difficulty with your freestyle in any way and you want to learn some specific drills to improve your stroke, you will find Four Drills that Will Make You Swim Faster located on the trinewbies.com website. Terry Laughlin's Total Immersion is also a good source for swim drills. If there is a masters swim program in your area with a coach, than I recommend you join. If you do have to swim solo, I have provided several workouts located in the Swim Section of this site.

Here are some basic facts that may help you as you approach your swim training. Most of today's pools are 25 yards in length and one length = 25 yards. 4 lengths = 100 yards. In a Sprint Distance Triathlon, the typical swim is a quarter mile (¼) or around 400-500 yards, which is equal to 16-20 lengths. Now, some ofyou may be swimming in a 50 meter pool which will be a bit different regarding lengths and distances.

Refer to conversion chart on the following page:

25 yard pool: 50 meter pool:
1 length = 25 yards 1 length = 50 meters
2 lengths = 50 yards 2 lengths = 100 meters
4 lengths = 100 yards 4 lengths = 200 meters
16 lengths = 400 yards 8 lengths = 400 meters
20 lengths = 500 yards 10 lengths = 500 meters

Cycling. Beginning a cycling program does not have to be difficult. As mentioned earlier, you will need a bike with gears. And this can be a mountain bike, a hybrid, or preferably a road/triathlon bike. Regardless of the bike you choose easy riding and building mileage is the key. You can start out with 10 miles or so on your rides and build to 25-30 miles in a relatively quick period of time without injury. In the beginning, do not worry about speed. If you live in a hilly area, try to stay as aerobic as possible on the uphill climbs. Switch to lower gears and try to stay in the saddle. If you happen to have a heart rate monitor, use it and try to keep your heart rate within your aerobic zone. If want to know more about Heart Rat Monitors and Methods of Heart Training click here .

Also, do not worry about spending big dollars on fancy bike equipment at this point. If you decide to stick with this sport, there will be plenty of time for you to blow your dough on the bike!

Just remember. Make sure your bike is safe and operating, as it should. Take it by your local bike shop and get properly fit. Have them check the brakes, the tires, the gears, etc. to make sure your ride is ready for the roads.

Running. If you are not or have not been a "runner" or you are not in the best condition, or perhaps you are returning to running after a long hiatus and you are heavier than normal, you need to approach your running program with care and some smarts. And, there are some excellent books on the market that will help you design a plan to get you high steppin' on the roads and trails:

Tim Noakes..Running Lore
Jeff Galloway…Marathon Training
Phil Maffetone…In Fitness and in Health

The reason I refer you to these books, besides the fact that they are interesting and helpful for over all health and fitness, is because these authors endorse walking as a

means of building a running program. And they incorporate walking in their programs. Folks, there is nothing wrong with walking before or during a running program. At 6'4" and 200 lbs, my size just doesn't warrant me pounding the

pavement as often as many of my lighter, quicker compadre's! So I add some walking. And I find it wonderful. But to each his own and you will learn what is best suited for your body, your size and your physical condition. If you do run on a fairly regular basis, run easy and keep your heart rate a little lower than normal, at least until you begin to acclimate yourself to your new training regimen.

And as mentioned earlier (and I cannot mention it enough) get yourself a pair of good running shoes. Visit a running specific store if at all possible and have someone check out your body position, how you stand, your gate or stride, your feet, etc. and determine what shoe is best for you.

In closing, remember you are incorporating a rather busy and body intensive training regimen - three sports and some weight lifting – with your already busy day. So please, train carefully and use your brain. Our goal at Tri-Newbies Online is keep you involved in this sport for the long haul.

Be patient and Good luck.

Methods of Heart Rate Training

Hazen Kent

Today, heart rate monitors are being used in all forms of exercise and have earned their place in the training world as a legitimate training aid.

And why are they so popular?

Because they work!

The heart is the battery of our complicated human body, much like a 12- volt battery is the heart of an automobile. And like an automobile, when our "battery" fails to operate everything else ceases to function, regardless of how well the working parts are capable of performing. Since the introduction of the heart rate monitor, athletes have been able to evaluate their health, fitness and athletic performance simply by the beat of their heart. This watch-like instrument coupled with a chest strap can play the role of doctor, physiologist, training partner and even coach.

Do you have a cold or flu? Are you stressed out about work? Are you overtrained? Did you sleep poorly last night? Are you running too fast? Are you cycling too hard? Combined with a little common sense and deductive thought, the heart rate monitor can answer all of these questions. And its accuracy is remarkable.

Therefore it is no surprise that this wonderful little tool has been so widely accepted among triathletes all over the world. With the physical demand triathlon places on the human body, the heart rate monitor has proven to be an essential tool for a successful, well-balanced training and racing program.

Typically, triathletes use the heart rate monitor as a means of keeping tabs on their aerobic system. But it can also come in handy during anaerobic training as well.

Hold on there a minute…what exactly do you mean by aerobic and anaerobic?

Sorry about that.

A good question and one that should be addressed before we continue.

As triathletes in training and utilizing every ounce of energy our body can produce, it is necessary to understand the meaning of such terms and their place in the training world for an effective training program.

For our purposes we will keep the explanations as simple as possible. If you wish to find out more about Aerobic and Anaerobic training, you will find several excellent resources from which to choose in the appendix of this manual.

Today, the term aerobic has become somewhat of a buzzword synonymous with long, easy, “steady – state” training. And when exercising aerobically, all internal systems are operating in synch. Fat becomes your source of energy. You take in just the right amount of oxygen, which feeds the blood, which in turn feeds the muscles, ideally allowing you to exercise endlessly without fatigue. Of coarse, you must have the physical strength to keep pace with your aerobic system and this is where proper base training and weight work comes into play.

By contrast, anaerobic training refers to exercise with a much greater effort and is often synonymous with hurried, fast activity. When training anaerobically, your internal systems become somewhat out of balance as oxygen debt sets in. As you increase the intensity of your training, breathing becomes labored. You are taking in less oxygen, reducing the amount of “food’’ for the blood. The heart is forced to work harder to pump this blood to the muscles. Fat no longer becomes the source of energy. Rather, the glycogen stored in your muscles becomes the fuel. Unfortunately, as the glycogen is burned up within your muscles, it leaves behind a byproduct in the form of lactic acid. As the lactic acid builds up, you begin to feel its effects via a burning sensation in your muscles. But anaerobic training does have its place in a successful training regimen. Adding anaerobic training to your workout in the form of quality or speed work, will help develop your “fast twitch” muscles (fast moving) as well as help increase your aerobic capacity allowing you to run faster while remaining aerobic.

So where do you draw that fine line between aerobic and anaerobic?

To best answer this question let us take a look at two of the leading methods of heart rate training.

Today two methods of HR training have emerged as the most widely used among athletes in training. One is an updated version of the older 220 method and the other is Phil Maffetone’s 180 Formula.

The 220 Method

First let us begin with the older and still popular method or heart rate training sometimes referred to as the 220 method. This method is based on your

Maximum Heart Rate and at what particular percentage of this heart rate should you train. Your maximum heart rate represents the highest number of beats your heart will beat per minute when training or racing as hard and fast as you can (are you thinking anaerobic?) Therefore, the first step is to find your Maximum Heart Rate (MHR).

Some programs will have you run several laps around a track at full speed, or ride a bicycle uphill (a long hill at that) to determine your Maximum Heart Rate. And yes these do represent the most accurate means of achieving this figure, but they can also be the most detrimental causing injury to someone new to the sport. Thus, the 220 method will solve this problem by giving you a close enough reading to your maximum heart rate without the risk of injury.

Finding Your Maximum Heart Rate

By subtracting your age from 220 you arrive at a number that represents your Maximum Heart Rate. Once you determine your Maximum Heart Rate (MHR), you multiply a particular percentage by that figure to reach a specific training level or zone. Refer to the formula below:

Maximum Heart Rate x % of effort = Training Heart Rate (HR) in beats per minute

In this method, there are four levels of training and each represents a particular training zone (range). In our examples, we will use the figure 180 as the Maximum Heart Rate when determining these zones. On the following page, we will illustrate how to find these training zones.

60% to 70% of your MHR
180 x 60% = 108 beats per minute
180 x 70% = 126 beats per minute

This would represent a training range of 108-126 beats per minute. This level represents easy, relaxed training. Ideal for long runs and long rides.

70% to 80% of your MHR
180 x 70% = 126 beats per minute
180 x 80% = 144 beats per minute

This would represent a training range of 126-144 beats per minute. This level represents your aerobic zone.

80% to 90% of your MHR
180 x 80% = 144 beats per minute
180 x 90% = 162 beats per minute

Welcome to anaerobic training! Workouts are of a greater intensity such as interval based training. For running, this would include track workouts or fartlek runs. For cycling, a time trial.

90% to 100% of your MHR
180 x 90% = 162 beats per minute
180 x 100% = 180 beats per minute

This is maximum output. Usually represented by short bursts such as the end of a race.

One note: If you read and research heart rate training you will find that these percentages will vary. For example some consider the aerobic zone between 65%-75% of your maximum heart rate. If such discrepancies leave you frustrated than stick to the middle of each zone and you should be fine.

The 180-Formula

Another method of heart rate training that has gained popularity over the past several years is the 180-Formula introduced by Dr. Phil Maffetone. Unlike the 220-Formula, this particular method is not based on your Maximum Heart Rate but rather your Maximum Aerobic Heart Rate (MAHR). And there is a difference. For example, my Maximum Heart Rate on a run is about 185 beats per minute. My Maximum Aerobic Heart Rate, based on the 180-Formula is 143. Once you determine your MAHR, you must then determine your base aerobic zone. This zone will act as a base or foundation from which a more specific zone can be determined based on your current fitness level. To find your base aerobic zone, simply subtract 10 from your MAHR and the result will yeild a number that represents the lower end of the zone.

For example: my MAHR based on my age of 37 years is 143 or 180 – 37. This number also represents the upper end of the base aerobic zone. Now, subtract 10 from 143 and you get 133. This figure represents the lower end of the base aerobic zone. So, in this example, my base aerobic zone would be 133 – 143 beats per minute. This means if I keep my heart rate in this zone during exercise, I am maintaining an “aerobic” pace. Anything over this zone or 143, and I cross into anaerobic training. Now, let’s explore this in greater detail.

Determine Your Maximum Aerobic Heart Rate and Base Aerobic Zone

The first step in this process is to find your Maximum Aerobic Heart Rate (MAHR) and base aerobic zone. According to Dr. Maffetone's formula, this figure is achieved by subtracting your age from 180. For a 35 year old adult, the Maximum Aerobic Heart Rate would be 145 or 145 beats per minute (bpm). This would also mark the upper end or maximum rate of this individuals base aerobic zone. But in order to create a "zone" we must now determine the lower end. To do so, simply subtract 10 from the MAHR and you have it!

So for a 35 year old individual, the aerobic zone would be 135 beats per minute (bpm) –145 beats per minute or simply: 135-145 bpm

Now, this "zone" acts as the base or foundation for determining a truer aerobic zone based on current fitness levels. Below we will look how to reach your truer aerobic zone.

Adjust your Maximum Aerobic Heart Rate to your Current Fitness Level

The next step is to adjust the base aerobic zone to your present fitness level.

1. If you are currently ill or are recovering from an illness (heart problems, operations, hospital stay etc), or are on any regular medication you will want to adjust your entire zone down 10 beats from your base figures. For the 35 year old adult the results would be an aerobic zone of 125 – 135 bpm.

2. If you have not exercised before; you typically exercise but are currently injured; have cut back on your training; or often suffer from colds, flu's or allergies, adjust your aerobic zone down 5 beats from your base figures. For the 35 year old adult, this would result in an aerobic zone of 130 – 140 bpm.

3. If you have been exercising for up to two years without any real problems; have been making progress in competition and have remained injury free, no adjustment is necessary. For the 35 year old adult, the aerobic zone would be 135 – 145 bpm.

4. If you have been exercising for more than two years without any real problems; have been making progress in competition and have remained injury free than you can actually adjust your figures upwards by 5 beats. For the 35 year old adult the resulting aerobic zone would be 140 – 150 bpm.

Remember, these numbers representing your aerobic training zone with the upper or higher number of the zone being your Maximum Aerobic Heart Rate, not

your Maximum Heart Rate. These numbers are also expressed in beats per minute or bpm.

And there you have it. There are some wonderful book son the market that explain in greater details the benefits of heart rate training and the use of heart rate monitors. I recommend reading all you can. Good luck and train smart!

Open Water Swim Tips and Techniques

Hazen Kent

The fears and concerns related to open water swimming are very real. The most obvious reason being, most of us do our swim training in the safety of a swimming pool complete with lifeguards, walls on which to rest, lane ropes that calm the water (and to grab if need be) and a shallow bottom on which to walk leaving even the most timid swimmer feeling safe and secure. In the open water these conveniences are not always available, especially in the ocean. Yes, there may be lifeguards on duty, but that doesn't help much when you are 50 yards offshore swimming in fifteen feet of water and the lifeguard appears as a small red dot on the horizon. Add to that the chance of rough seas and swells breaking close to shore as well as the possibility of an undertow or runout and its no wonder such fears exist. Lakes are not as bad as the ocean and tend to be a bit calmer, but you still have to keep an eye out for boaters (and critters) and be sure to swim in designated areas.

Please understand, I am not trying to add to anyone's existing fears of swimming in open waters. But for me to say, *"you have nothing to worry about, swimming in the open water is a piece of cake"* would be a lie. It can be a wonderful experience but you must be aware of your surroundings and practice safe swimming.

Below we will discuss some tips and suggestions for training and racing in the open water that may help you focus less on your trepidations and more on your performance!

So let's get to it!

Get Out There in the Open Water and Practice, Practice, Practice – As obvious and cliché as this may sound, it really is *the* best way to get used to swimming in open water. And you will learn very quickly that swimming in open water is much different than in a pool. For one, there is no thick black line running along the bottom of the ocean or lake to help guide you as you swim. Unless the water is crystal clear, you will have to lift your head to "sight" or see where you are going. And you will probably take a swig or two of water during your swim. So the more you hit the open waters to swim, the better the results.

Sprain your Brain…Safety First – *Yea, yea, yea…safety first…no kidding!* And you are right. It seems we are always preaching safety. Unfortunately, many drowning accidents in open bodies of water are often easily preventable. Folks, use your head and leave your ego at home. Don't swim alone in an open body of water unless there is a lifeguard on duty or you have a friend to accompany you.

If you are swimming under the watchful eye of a lifeguard, let him/her know your plans and where you will be swimming. If you are planning on swimming in the ocean and the seas are rough…don't bother. It won't make you a tougher swimmer, chances are the race conditions will not be that extreme, and the bottom line… it may save your life! If you are swimming in a lake, swim in a designated area and swim along the shoreline if possible. Swimming straight out towards the middle of the lake will put you right in the middle of "motorboat" territory. And the boaters will not be looking for you. Plus, swimming along the shoreline will allow you to choose a comfortable depth in which to swim.

Test the Waters – whether it is just before the start of a race or you are out for a training swim, always test the waters and water temperature. In a race situation, I recommend getting in the water and warming up prior to the start. Get a feel for the water and do some warm-up strokes. If you are going out for a training swim, make sure the water is safe to swim in. Obviously if you are swimming in a public area, there should be no problems. But in areas where you are swimming at your own risk (with a friend of course!), familiarize yourself with the waters and stay close to shore. If you are training and you are wearing a wetsuit, make sure the waters are not too warm. It is easy to overheat when wearing a wetsuit. If the water temperature is above 80 degrees, I recommend swimming without one. By contrast, if the water feels too cold, take some caution. Obviously, a wetsuit helps to create warmth in cooler waters. But for folks swimming in the Northeast, Pacific Northwest and Canada, the water temperature can be dangerously cold, even in the summer months. So again, be careful. If you plan on training in unsupervised waters, I suggest you purchase an underwater thermometer to take with you. You can usually pick one up at a pool supply store or a larger sporting good store. Simply hold it underwater for a couple of minutes and you will know the exact temperature of the water before you start.

Practice Your Sighting – As previously mentioned, you will not have a thick black line running along the bottom of the ocean or lake to help guide you in a straight line. You must learn to lift your head and sight certain points in order to stay on track. If you are out for a training swim, you will want to look for various land markers. It may be a tall tree, a water tower, or the top of a building, something that you can see each time you lift your head to look forward. In a triathlon, there will be orange markers floating in the water outlining the swim course. Prior to the race, get in the water and practice sighting these markers during your warm-up.

Have Faith in Your Training and Your Stroke - It is not uncommon for all of us to get a little panicky during an open water swim. We get so used to swimming in a nice clear pool that we tend to "freak" a little when we realize we can only see a few feet in front of us! And as a result, we tend to lift our head and check our position much too often. Unfortunately, the more we look, the more disruptive we

are to our own stroke and pace. This will not only physically wear you out, but it can mentally tire you out as well. My word to you is – RELAX and have faith in your training and your stroke. You should be able to swim 5-7 strokes before lifting your head to cite without seriously straying off course.

Follow the Bubbles –During the swim portion of a triathlon (and unless you are the lead swimmer) learn to spot the "kicking" bubbles from swimmers that may be in front of you. Spotting someone in front of you from their kick is just one more way to keep you swimming straight without lifting your head to sight. NOTE: One word of caution, do not rely solely on these folks. Always keep track of the orange markers as well. It is possible to be led off course by the swimmers in front of you. This is another good reason to get out there and TEST THE WATERS. Check the visibility of the water. If you see others warming up, swim close to them, and practice spotting the bubbles from their kick.

Learn Bilateral Breathing – Breathing on Both Sides: If the swim course is an open rectangle whereby you swim out for a short distance then head left or right along the shoreline then back in again, you can use the shoreline as a means of marking your position. However, this may require that you breath to a particular side that may be uncomfortable. So practice breathing on both sides during your freestyle swim training. Also, breathing on both sides will keep your stroke in balance and allow you to swim straighter for more strokes. During your swim training, practice breathing every three strokes. This will force you to breath on both sides. If you are uncomfortable at first, use fins or a pull buoy until you develop a feel for this.

Take Advantage of the Draft: Drafting during the swim portion of a triathlon is legal. And placing yourself within a pack of swimmers of similar experience and speed can prove beneficial to your swim performance and overall triathlon performance. There are actually two ways one can draft off another swimmer. One is swimming directly behind a lead swimmer and the other is swimming in the wake of a lead swimmer. And both can be very effective in an open water swim. If you were to swim directly behind a swimmer and close to his/her feet the result would be a "pulling" effect (similar to that created by an outboard motor on a speedboat). If you were to swim in the wake of another swimmer, ideally you would position yourself just off the shoulder of that swimmer. The benefit being, an added push provided by the swells or wake created by that lead swimmer. NOTE: One note of caution. If you are swimming in a pack, things can get a little rough. There will be swinging arms and kicking feet and you might find yourself getting "wacked" by accident. Try to stay relaxed and let the momentum of the moving water push you along.

The Start and Positioning - With the exception of a few specific races, there are two ways you will start a traditional triathlon…either wading in deeper water or

beachside which requires a running start. If you start beach side or even in ankle deep water, you will quickly discover you can only run so far in the water before it becomes counterproductive. Unfortunately, you may still be too shallow to start swimming! So what do you do? Many triathletes will "dolphin" for several yards until they are deep enough to begin swimming. "Dolphining" refers to a swimmer taking a shallow dive or leap forward, gliding for a few yards under water, then standing and leaping out again until the swimmer is deep enough to begin swimming. This can be very effective. And you will probably find the more competitive and/or experienced swimmers performing this technique. However, it is not necessary. There is nothing wrong with walking into deeper waters before swimming. Plus, if you are among a large group at the start, most likely, you will not have the room to dolphin. This too will be a result of how competitive you want to be and your swimming background. NOTE: One note of caution…if you do dolphin…DO NOT DIVE DEEP! If you dive too deep you can seriously injure yourself. Know the depth of the water where you are swimming and keep the dive portion of the entry shallow. Finally, regarding Positioning at the start - if you have problems with the masses, then stay out of them! Place yourself to one side of the group or the other prior to the start.

Start Out Relaxed! I have read and heard others recommend to start out your open water swim with a hard or "all out" effort in order to put yourself in a particular position or pack of swimmers and then settle into your pace. And if you are competing in an open water race only, I might agree. However, you are not competing in an open water swim competition. You are competing in a triathlon. After you complete your swim, you then have to jump on a bike and cycle for 10, 25, 56 or even 112 miles. And how you feel after the swim, especially regarding your heart rate, will be a big factor in your overall performance. Starting out too hard on the swim will cause your heart rate to "spike" or shoot up to anaerobic levels, leaving you in oxygen debt at the onset of the race and forcing you to try and "catch your breath" during the "settling in" period. And for most, "settling in" never really happnes, regardless of your swimming experience. I suggest building your speed throughout the swim. Start out swimming long and relaxed. Find your pace. And once you have found a good pace, then you can turn it up a notch if you want. This will keep your heart rate lower and leave you better prepared for the bike ride.

Drills for Open Water Swimming – As mentioned in the beginning of this article, the best way to acclimate to open water swimming is to go out in the open water and practice! However, most of us do not have access to a lake or ocean to perform our swim training. So, we must do our training in a pool. Unfortunately, a pool will not really give you that "open water" feel. This is due to the fact that the pool will have lane ropes stretched from one wall to the other designed to calm the waters. However, there are a couple of things we can do in a pool to prepare for the swim portion of our next triathlon. One is to practice a drill I call

the Water Polo Drill. And the other, do a swim workout or two in your pool without the lane ropes.

Water Polo Drill (or open-face swimming) – Have you ever had the opportunity to watch a water polo match? If you have, then you probably noticed the team members spending most of the match swimming up and down the pool with their face out of the water. Well, the Water Polo Drill is based on this open-faced swimming. Basically, this drill requires that you swim freestyle with your face out of the water. This will help develop the necessary strength to lift your head when sighting during your triathlon without disrupting your freestyle rhythm. However, it is not as easy as it may appear and can put some stress on your neck and lower back. So feel free to start out using fins until you feel comfortable enough to swim without. And do not use a pull buoy.

Drill Set 1: In a 25 yard pool, swim 10 x 25's - 12.5 yds with your face out of the water, and 12.5 yds regular freestyle. In other words, swim half the length with your face out of the water and half regular freestyle. Take 15 seconds rest between each 25.When you begin to feel comfortable with Drill Set 1, then challenge yourself and move up to Drill 2.

Drill Set 2: 10 x 50's…swim 25 yds face out, 25 yards regular freestyle. Take 20-30 seconds rest between each 50. Remember, this can put added stress on your neck and lower back so feel free to wear fins until you feel comfortable without.

Swim Without Lane Ropes – Basically this means you are training in the pool without lane ropes. This can create a heck of a chop and will be the closest thing to an open water swim you will experience in a pool environment. Unfortunately, this may not be convenient or even possible. However, if part of the pool is set up without lane ropes, and there is no "free" swim going on, do your workout in the open portion of the pool. NOTE: One word of caution. Usually the area without lane ropes is reserved for "free swim." If it is crowded and kids are playing in the area, do not swim in the area. Injuries could result from careless play. If it is crowded, stick to the "lap swim" area.

And there you have it folks! I hope these steps help ease some of your fears or frustrations regarding open water swimming as you approach your next triathlon. Good luck!

Tips for Riding in Traffic

Warren Green

Triathlon and cycling events are wonderful - cops blocking the traffic, no cars on the road, no traffic lights and stop signs to worry about. Unfortunately, we don't have the same benefits during our training rides. Every cyclist has a long list of stories about their close calls with cars and trucks, and too many have stories about being hit.

This article contains a few suggestions for cyclists for dealing with traffic. These are my techniques and practices, and you must evaluate whether they work for you.

DO NOT ASSUME THE DRIVER SEES YOU. Even when you think you have made sustained eye contact, drivers often are oblivious to understanding what they see. I sometimes think that despite riding a pink bicycle and usually wearing a yellow jersey, I am invisible.

DRIVERS DON'T REALIZE HOW FAST YOU ARE MOVING. Drivers think of bikes as slow-moving toys, and they do not understand that you may be moving at more than 20 mph (or, if you are Jurgen Zack, more than 30 mph). Consequently, drivers sometimes don't realize they are cutting you off when they dart out in front of you to cross at intersections, or pass you just to make a right hand turn onto another street or highway access ramp.

ALWAYS PLAN AN ESCAPE ROUTE. When you ride, think about where you might swerve if you have to bail out. What will you do if there is a rim-eating pothole or sewer grate in your path, or the rider in front of you applies the brakes unexpectedly. Do you have room to move left or right without running into a car or a curb?

BEWARE OF CAR DOORS. When you are passing a line of parked cars, look for people in the drivers' seats who might open a door without looking. Being "doored" is a common cycling accident. A parked car also presents the danger of pulling into the roadway in front of you.

MOVE WAY OFF THE ROAD WHEN STOPPING. If you pull off the road to check route, catch your breath, whatever, pull WAY off the road. A friend of mine was stopped on the shoulder of the road checking his map, and although he was at least three feet from the white line at the edge of the road, an 80-year old driver wearing fashionable wrap around "cataract" type sunglasses veered off and clipped him. He's lucky that he survived, and the only legacy is an aching leg when the weather changes and an inability to run. (When the docs wanted to put

steel pins in his leg, I suggested he insist on titanium to save weight, but the docs didn't agree.)

ALWAYS WEAR A HELMET. And keep that strap buckled. The helmet should sit firmly on your head, with the front edge about two finger-widths above your eyebrows. It is not a cap to be tilted to the back of your head, or worn like a yarmulke.

PAY ATTENTION TO RIDING. Are you distracted on the bike? There you are, cruising down the highway resetting the lap timer on your watch, monitoring your cadence and clicking the buttons on the cycle computer to check distance and average speed and elapsed time, glancing at the gears to confirm you are pedaling efficiently, grabbing a snack from your jersey, and checking your heart rate monitor to make sure you are still in the zone. No wonder you thought that pothole seemed to sneak up on you. A lot of accidents are caused by distraction, and the toys we use add to that risk.

RIDE WITH A FEW OTHER PEOPLE. First, you can learn a lot from experienced riders. Second, it makes the miles go easier. Third, knowing you are meeting up with a group is a great incentive to getting out for the training ride. Fourth, it increases the odds that a driver will see you. Fifth, it discourages random violence and outbreaks of road rage from drivers.

DO NOT NEEDLESSLY PISS-OFF DRIVERS. Drivers think they have personal space on the road. The perception that their space is being violated or they are being challenged is a principal cause of road rage. Avoid taking actions that provoke this reaction. For example, after drivers have finally moved around you to pass you on the road, don’t re-pass them at the next traffic light, and circle in front of them blocking the lane while waiting for the light to change, just to make them wait to maneuver around you again a quarter mile down the highway.

IT DOESN’T MATTER IF YOU HAVE THE RIGHT OF WAY. You are on a 21 pound bicycle, but the driver has a 3000 pound lethal weapon. A driver going through a red light or otherwise ignoring your right of way and hitting you will think he had a bad day and may wind up with a ticket; your life could be ruined or ended. Let it go. I remember teaching my daughters that when the light turns green for you, you don’t go, you look. Sound advice for children and cyclists.

And don’t forget to enjoy yourself.