

BULLET PROOF STAMINA

A MONTH-BY-MONTH GUIDE TO BUILDING ENDURANCE

This guide is based on over 20 years of helping athletes reach their athletic goals. Its purpose is to demonstrate the typical month-by-month training schedule for the average endurance athlete. The ways to build your fitness and prepare for an endurance event are nearly infinite, but the general methods explained in this guide are trusted and well-tested methods to build your endurance in a natural, safe, and healthy way.

Before beginning, let's review some basics:

ENDURANCE ATHLETE HIERARCHY OF NEEDS

All athletes have a natural ability, but the quality of training determines if they reach their potential. Below are the most important factors for the endurance athlete (*in order of most to least important*):

1. Frequency and volume of training
2. Training intensity distribution
3. Daily and race nutrition
4. High intensity interval training
5. Annual periodization of workouts and races
6. Specific strength
7. Race specific simulation
8. Tapering

YOUR TRAINING ZONES

The first lesson an endurance athlete must learn is that not all workouts need to be 'hard'. Five training "zones" are typically used to clarify the desired intensity for a workout.

Zone 1 (Z1): A conversational effort typically used for warmups and cool downs, but also for early base training or very long base building workouts. Heart rate (HR) range is 50-65% of max.

Zone 2 (Z2): The classic 'base building' intensity. *Approximately 80% of an athlete's training time should be spent in Z1 and Z2.* HR range = 65-75% of max. This is also the typical intensity of an Ironman race.

Zone 3 (Z3): "Tempo" Z3 often feels "easy-fast". Heart rate is typically between 75-85% of max. Intervals in the 15-30min range. This is the typical intensity of a 70.3 race.

Zone 4 (Z4): "Threshold" Z4 feels hard. Intervals are short, in the 6-10min range, with a best effort being no longer than 60min. HR range = 85-95% of max. This is the intensity of a typical Olympic distance triathlon.

Zone 5 (Z5): "Speed work/intervals" Z5 is very hard, and the pace is similar to a 5k race. HR range = 95% to max. This is the intensity of a typical sprint distance race.

Note that a workout may have a mix of intensity. For example, a run may start with a Z1 warmup, some Z2 base building, and conclude with a few Z4 intervals.

CAPTURE YOUR TRAINING DATA

A quality GPS watch like the Garmin Forerunner is a great way to capture and record your training data. Most of today's watches record heart rate, the easiest way to determine if you're in the right training zone.

LOG YOUR DATA AND PROGRESS

An online training calendar like Training Peaks allows you to record your progress and analyze all the data captured by your watch, heart rate monitor, and other tech. A training calendar is also a great resource for our coaches to review if you decide [private coaching is for you](#).

JANUARY

BEGIN STRUCTURED BASE TRAINING

Base training is the foundation of your fitness pyramid. It starts by identifying a simple rhythm of workouts that you can repeat regularly. Base fitness is built by consistently exercising at a relatively low intensity with ~80% of your workouts in Z1 and Z2, and the remaining in Z4 or Z5.

Your primary goal this month is consistency and frequency of exercise. Try to gradually increase your weekly training volume by 10% per week, mostly by extending your weekly long swim, bike, and/or run workouts.

INTEGRATE CROSS TRAINING AND STRENGTH TRAINING

We fortunately live in a city with four seasons and access to various sporting activities. Activities like alpine skiing, cross country skiing, and snowshoeing allow you to enjoy our winter months while building your stamina.

Strength training is a great way to balance out all the aerobic work. Squats, trap bar deadlifts, lunges, pull ups, and bench press are excellent options. One or two 30 minute sessions per week is typically enough to build strength that will support your endurance sports performance. After a good warmup, keep the number of reps low (4-6 reps), and the weight relatively high.

CONSIDER...

A Bike Fit: A good bike fit can help prevent injury, and improve your comfort, power, and speed on the bike. A bad bike position will prevent you from reaching your potential. We recommend [scheduling a bike fit](#) to confirm your bike and your body are set up for success.

RECOMMENDED TECH

Indoor Trainer: Biking outdoors can be impractical this time of year. A quality indoor trainer like a [Wahoo Kickr or Kickr Core](#) is a great way to make sure you get the necessary time on the bike.

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FEBRUARY | MARCH

CONTINUE BUILDING BASE FITNESS

With a few weeks of base training under your belt, you may consider a [Blood Lactate Threshold Test](#). This exercise test helps to accurately determine your training zones, identify race intensity, and gauge changes in fitness.

Experienced athletes may spend 3-4 months building base fitness. New athletes may benefit from an even longer base building period, especially if training for ultra-distance events like Ironman or Leadville 100. By the end of the base building period you should know that completing the race distance will not be a problem. The only question may be how fast.

CHALLENGE YOUR ENDURANCE

By now you should have a pretty strong base level of fitness, and are ready to challenge your stamina with workouts that are similar in duration to your event. The intensity will be lower than goal race intensity, but the duration and/or distance may be equivalent or even longer.

REDUCE CROSS TRAINING ACTIVITIES

The race season is approaching, and cross training activities should be reduced to focus more on sport specific training. There is no need to completely stop cross training, but it should be secondary to your more specific training.

RECOMMENDED TECH

Bicycle Power Meter: A [power meter](#) pairs to your GPS device and measures how much power you're producing while riding. A power meter is an excellent way to pace a workout and measure changes in fitness. Combine your power data with heart rate data to build a well-rounded picture of your overall fitness.

APRIL

SPORT SPECIFIC STRENGTH TRAINING

At this point you should have a good base of fitness, and are ready for training that develops *strength specific to your sport*. Examples include swimming with paddles and riding/running hills. If you do not have hills where you live, you can replicate them by riding your bike in a big gear on the flats, or running on a treadmill at a 3-6% incline.

If your long workouts are not yet at or past race distance and duration, keep working on building up your stamina by completing long, weekly Z1/Z2 base building workouts.

This is typically the most volume intensive training time for athletes. It is important to get your time and distance in before starting the more race specific intensity work.

The intensity balance is still 80% in Z1 and Z2, and 20% in Z4 and Z5 for most endurance athletes. If training has been going well, consider extending the number and/or duration of your high intensity intervals.

CONSIDER...

A Training Camp: A great way to boost your fitness is with a training camp. A few days in a sunny location, on new roads will help build excitement and boost your fitness. Remember: the real value of training camps is not the extra training, it's the extra time spent recovering between workouts.

RECOMMENDED TECH

Garmin Varia Tail Light: The [Garmin Varia](#) is a powerful tail light with a built-in car sensing radar. When paired to your GPS device, the Varia provides a visual and audible indication of any cars approaching from behind. The Varia dramatically improves your visibility and comfort on the open roads,

MAY | JUNE

RACE PREPARATION PERIOD

May and June are key months to refine your race pacing. Complete your key workouts at/near race intensity and duration. Overall weekly volume is no longer increasing and will most likely decrease from the highs of late March and April.

Now is the time to begin integrating Z3 specific work into your training, especially if your race will include a lot of time in Z3. Use Z3 training to test your race equipment, and conduct the workouts on terrain similar to what you expect on race day.

REFINE YOUR RACE NUTRITION STRATEGY

Use your key workouts (*race simulation*) to determine your hydration and nutrition needs. Consider what you have for dinner the night before, breakfast, and what you consume during the workout itself. Nutrition is highly personal, experimentation is the key to success.

CONSIDER...

Training Races: Now is a great time to test your fitness with a training race. Use training races to build experience, test your preparedness, and boost overall fitness. A short taper of 3-6 days is all that is necessary for a training race.

Tuning Your Equipment: Now's the time to make sure your equipment is working perfectly. [Schedule a tune up or](#)

TRI TOWN BICYCLES

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[simply bring your bike in](#) for our expert mechanics to review.

JULY | AUGUST

RACE SEASON

Race season is finally here, and it's time to put the last 6 months of training, dedication, and commitment to the test. When your training is done correctly, race day simply feels like a well supported training day. You've tested all the variables in training, and now you simply execute a well rehearsed plan.

During the racing season, most workouts will be in Z1/Z2 or at/near race intensity. Training volume will often decrease slightly overall. Use this reduction in training time to increase your time spent on recovery.

In the race itself, trust your training, avoid getting pulled into the pace of the athletes around you. The training you've done the last few months was designed to refine your sense of pace, disregard it at your own risk. Maintaining your pace throughout the event, or picking up the pace slightly as the race unfolds are both signs of good pacing.

TAPER

Like nutrition, *tapering for a race is highly personal*, experimentation is key. Two weeks is the typical taper duration. During the first week of the taper, drop your training to 70-80% of normal. On race week drop your volume to 40-60% of normal. The frequency of workouts and the intensity of workouts should remain similar to the prior month.

RECOMMENDED TECH

Chain: A quality chain that is clean and properly lubricated can improve shift performance and reduce mechanical resistance. [Now is a good time to have your chain inspected by our professional mechanics.](#)

Wheels and Tires: Quality wheels and racing tires at the correct air pressure make a significant difference in comfort and speed on the bike. Consider [renting](#) or investing in a set of race wheels and tires to save minutes off your bike split.

SEPTEMBER

RECOVERY

A short break is typically needed after a successful race season. A couple weeks of easy, unstructured activity of your choice is an excellent way to recharge the batteries.

MINI BUILD

If you have another event scheduled for the fall, use the remaining time to work on your base fitness with training similar to what you were doing in February and March. Don't rush back into this, extend your recovery period if you're not feeling excited to train.

ADDRESS YOUR WEAKNESSES

Your event(s) from earlier in the year may have highlighted aspects of your fitness that need further development. Use these weeks before your late season race to address your specific limiters. Better yet, jump into a short race that specifically challenges your weaknesses. This is how we grow as an athlete.

OCTOBER | NOVEMBER

LATE RACE SEASON

A key late season race is typical for most endurance athletes. By now, you should have excellent base fitness, and another season of experience under your belt. Trust your fitness and test your body with confidence.

Your training this time of year will look similar to what you were doing in May - August, only more condensed. Instead of spending 4-6 weeks conducting race specific pace intervals, you may only spend 2-3 weeks.

The season has been long, an important goal this time of year is to avoid the feeling of burnout. Your overall volume may continue to drop slightly, more recovery time may be needed between workouts.

Before race day reflect on your last race and consider what you can do better this next time around. Experience is built from trying new things and learning from the past.

DECEMBER

Congratulations on a long and successful season! You are ready for a well deserved break. Take it easy for a few weeks, spend more time with friends and family, enjoy the holiday season, and workout when it seems fun and enjoyable.

Train smart, and see you next season!

TRI TOWN BICYCLES

ANSWERS

TO COMMON ENDURANCE SPORTS QUESTIONS

Q | *You offer private coaching... How does that work?*

Tri Town is a team of athletes and coaches, and yes, we offer individual, personalized coaching for athletes training for swimming, biking, running, and triathlon events. Learn all about it on [our coaching page](#).

Q | *This guide is helpful, but do you have something more specific?*

Absolutely. Private coaching is always an option, but we have also published a general training plan that follows all the principles explained above, and the best part is that it is 100% free. Learn all about it on [our Team Tri Town coaching page](#).

Q | *How do I get faster if 80% of my workouts are in Z1 and Z2?*

The objective is not “to go slow” in Z1 and Z2. The objective is to build speed from the bottom up. The best athletes can go quite fast in Z1 and Z2, and they built that speed by spending a lot of time in those zones. The “*Hierarchy of Endurance Sports Needs*” also states that frequency and volume of workouts are the most critical indicators of success, and Z1/Z2 workouts are the only workouts that can be done on a near daily basis.

Q | *How often should I take a rest day?*

At the most basic level, you should take a rest day when you feel like you need it. If you have good energy and want to workout, then you’re probably fine to exercise. Often our need for a rest day is not because of the exercise we’ve done, but because we have not optimized our recovery.

Q | *What are the best ways to recover from a workout?*

Nothing beats a healthy diet and quality sleep. Additionally, confirm you’re not spending too much time training in Z3 and above.

Q | *What books, blogs, or resources do you recommend?*

[Join our weekly newsletter](#) for updates on the local endurance sports scene.

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