

# Hunter Allen's Eight-Week Spring Power Training Plan





## HUNTER ALLEN

Hunter Allen is internationally known as one of the top experts in power meter coaching. He founded Peaks Coaching Group (PCG) in 1996 to focus on developing the artful science of efficient power training for which PCG is still known today.

As a former professional cyclist, power coach, co-author of the book *Training and Racing with a Power Meter*, and co-developer of Training Peaks WKO+ software, Hunter has been deeply involved in all aspects of data-based training, from user to application builder to educator. He has now coached over 400 athletes, and learns something new from each one.

## Greetings!

Hi, I am Hunter Allen and your coach for the next eight weeks. I built this plan using all of the same power training principles and coaching philosophies that I use with my personal clients. I have spent years coaching riders at every level and have worked with thousands of clients in over 15 countries. I have developed TrainingPeaks WKO+ software, written books on training with power, and taught over 500 coaches the secrets of power training and data analysis. Along the way, I have learned many things about success in cycling. I have discovered that you can produce more watts by blending science, data analysis, and a power meter. Combining those secrets with my own personal coaching philosophies can raise your wattage output even more. Follow this guide with a clear conviction, continual focus, and dogged determination, and I know you will become faster, stronger, and more powerful.

Prepare to succeed!

## Hunter Allen

### Introduction

Welcome to your eight-week training plan designed to improve your functional threshold power, enhance your endurance, and prepare you for weekend races, group rides, and even gran fondos. This plan is made for the rider who has 6-12 hours a week to train, has a power meter, and is ready to improve his or her threshold power. This plan will be challenging yet realistic. It is built to give you just the right amount of work when you can handle it, along with rest so that you can adapt and improve. Make sure you have a solid foundation of training before you embark on this plan. Rest weeks come every fourth week, but feel free to take a rest week sooner if you need to. Keep in mind that it is ideal to complete the workouts in the planned order, but that it is OK to move them around.

**SPECIAL THANKS to Dr. Andy Coggan for generously allowing us to incorporate some of his articles and tables.**



## What is training with power, and why should I train with a power meter?

Training with power means using the most advanced tool in the cycling industry to maximize your athletic potential. A power meter is a device that measures the amount of wattage you produce while pedaling your bicycle. Power meters can measure watts using the hub of the rear wheel, the “spider” of the crank arm, the axle of the bottom bracket, or even the tension of the bicycle chain. A power meter looks just like a larger, more complex bicycle speedometer and records every few seconds while you ride. It records many different metrics, including power, heart rate, speed, cadence, torque, and distance. You can then download the data to a computer and perform some simple analysis to determine your best training or racing plan.

Why should I train with a power meter?

1. **Training with a power meter gives you a complete record of your effort.** A power meter records your effort on a cardiovascular level (heart rate) and on a muscular level (watts). Know how much time you've spent in your training zones. Highlight key data segments—hills, sprints, attacks—for review by you, your coach, or even your teammates!

2. **Add real meaning to your heart rate monitoring.** Heart rate alone does not tell you how your actual performance is improving; it just tells you how hard your heart is working. A power meter measures your rate of work (power) and analyzes your efficiency by allowing you to compare heart rate, power, cadence, and speed.
3. **Track your fitness changes.** Know with certainty if your fitness is improving and when you have reached a peak. Avoid over-reaching and over-training by tracking your TSS and IF levels (see Appendix for details on TSS and IF). With these metrics, you can easily see and track your changes in fitness.
4. **Analyze your race.** Want an objective gauge of your energy use in a race? A power meter can help you better analyze your race efforts. You can easily see when you “burned a match” and if you used too much energy in parts of the race that weren't decisive. Did you make a tactical error but didn't realize it? By reviewing the data, you can replay the race in your head and see exactly what it would have taken to make the winning break or the decisive split. If you got shelled, you can see where you need to focus next time.
5. **Pinpoint your strengths and weaknesses.** Do you get dropped when your cadence drops below 80rpm? Are you a cat. 1 in your five-minute power, but cat. 4 in your 20-minute power? Do you get popped if you have to do 105% of your threshold power for more than three minutes? With a power meter, you can analyze your performance and training to identify your natural talents. Then, by using Coggan's Power Profiling, you can quantify those talents and easily see where you need improvement.
6. **Improve your interaction with your coach.** A power meter brings you and your coach closer together. By reading your power files, your coach can track training habits that he or she would not otherwise be able to observe. Your coach can then use your data to improve your training plan and instantly see what you are doing in races or training rides. A power meter doesn't lie!
7. **Achieve your physical potential.** When you train with a power meter, you can concentrate on your workload and experience extra motivation to complete your efforts. For example, if you are doing a five-minute effort and see your average watts dropping near the end, you'll know to pick it up just another notch in order to achieve your five-minute power goal.
8. **Test your position and aerodynamics.** Your body position is the single greatest factor in determining your speed while riding at a specific power output. Why risk the disadvantage of a poor position when you can measure your aerodynamics and discover your fastest position?
9. **Pace your efforts.** A power meter allows you to pace your efforts better in all of your interval workouts, hill climbs, and time trials. When you know your threshold power,

you will know that you went as hard as you could possibly go without blowing up. Also use your power meter in breakaways to know if you are going too hard and risk getting dropped.

10. **Test in your own mobile lab.** Test your power on a monthly basis to see exactly where you have improved and where you still need work. By testing regularly, you can better avoid over-training and understand your potential for improvement.
11. **Enhance your indoor training.** Use your indoor trainer effectively by focusing your intervals exactly in your desired power zones. Indoor training gains new meaning when you can compare your intensity to efforts on the road.
12. **Calibrate your sports nutrition for your best performance.** Knowing how much work (in kJ) you expend in training allows you to plan your post-exercise meals to the kcal. You will recover faster and be able to train harder sooner. You will also be able to work toward your ideal physique by eating enough to supplement or maintain your muscle mass. Look online for numerous calculators to help you convert from kJ to calories.
13. **PLAN, CONTROL, AND EXECUTE your training like the pros.** Train efficiently so that your fitness peaks at your goal events. Every top cycling performance has been aided by power meter training technology, including Tour de France wins, hour records, and track records.

## Getting Started with Training with Power

Now you have bought one of these fancy training devices, installed it ever so carefully on your bike, loaded your TrainingPeaks WKO+, and figured out how to toggle between two buttons and four screens while riding one-handed at 25mph. But what the heck do you actually do with it!?

The short answer is lots of things. Let's break down each aspect of training with power so you can get the biggest bang for your buck.

First and foremost, you need to perform some formal tests. The very first test you should do is one to establish your baseline fitness. This involves three easy steps:

1. Test FUNCTIONAL THRESHOLD POWER (FTP)
2. Establish training zones
3. Follow the included plan

### STEP 1: - Test Functional Threshold Power

How do you go about determining your functional threshold power (FTP)? One way is with laboratory testing and invasive blood sampling, but few people have access to such testing on a regular basis. In addition, power at lactate threshold determined in this manner is often significantly below what athletes and coaches tend to think of as a "threshold." A more convenient and probably more accurate way of determining your FTP is to simply rely on data collected using your power meter in the field. There are different ways of doing so, each of which has its advantages and disadvantages, but all of which provide very similar estimates of threshold power.

FTP is your best one-hour average power, which is difficult to test directly on a regular basis. One hour is a long time when you are on the limit, and in many places it might be difficult to find an uninterrupted section of road that's long enough. With this in mind, the test that I give my athletes is the 20-minute test, which is a great proxy for the hour test if you subtract 5% from your 20-minute average. The resulting number will be close to your FTP for an hour, and a 20-minute test is infinitely more doable than an hour test! Alternatively, if you already have a good amount of power data, you can find your FTP in the data. Below I outline four methods to find your FTP. Use whichever is best for you right now.

#### 1. Monthly 20-Minute Test

The monthly 20-minute test does not have to be done monthly as the name implies. However, you should definitely test at least every six weeks. The test is a great workout in and of itself, so don't think that you are losing anything by completing it.

Begin with a 20-minute warm-up, and then do three fast pedaling efforts of 100rpm for one minute each and with one minute between each effort. These are to help open up the legs and finish warming up the muscles. After the fast pedaling, ride for three minutes easy at under 150 watts.

The next effort is a test of your anaerobic capacity: Do two one-minute efforts with five minutes between each. Start out of the saddle and accelerate hard up to speed, really pushing until you explode at the end of the minute. This is a great test to see what your peak one-minute power is, so that when you repeat this later in the plan, you'll have a reference point. It's also meant to pre-fatigue your anaerobic system so that your average power at the end of your 20-minute test will be closer to your one-hour power. After the one-minute efforts, ride easy for 10 minutes or until fully recovered.

Finally, it's time for a 20-minute time trial! Again, remember that your goal is to produce the best average power you can for the entire 20 minutes, so don't start out too hard and blow up in the first five minutes. It's important that you really give it your all. Focus and push hard! If possible, do this on a climb or on a flat road. It's hard to get a good average on a rolling road, because your power tends to drop on the descents. Traffic can also interrupt your test, so it might be best to do the test indoors if you live in a highly populated area. Just make sure you are always being consistent with your test and use the same location for the next one.

After the 20-minute time trial, cool down for 15-30 minutes of easy pedaling.

## 2. Review Past Power Data

You can often get a good estimate of your functional threshold power by simply uploading all of your training data into TrainingPeaks WKO+ and then examining the power frequency distribution on your "Athlete Home Page." Because exercising above threshold power is quite strenuous and there is a limit to how long you can do it, there will often be a rather noticeable drop-off above this point in this graph. This same approach works even better for identifying your spontaneously-achieved maximum heart rate, thus reducing or even eliminating the need for formal testing! Of course, this method works best if the time period being examined includes some high-intensity training and/or racing, which serves to clarify the distinction between sub-threshold and supra-threshold efforts. Also, sometimes the drop-off in time spent above threshold power is more apparent when the width of each power "bin" is reduced from the default of 20W to a smaller value like 5W or 10W. TrainingPeaks WKO+ has been specifically designed with customizable graphs to make this analysis possible.

## 3. Review Normalized Power Data from a Race

Perhaps an even more precise way of determining your threshold power, yet one that still doesn't require any formal testing, is to examine your normalized power from hard mass-start races that are approximately an hour long. Because TrainingPeaks WKO+ automatically calculates normalized power even if you haven't yet entered a value for your threshold power, using the program to analyze several race files may be the quickest way to get a good estimate of your threshold power.

#### 4. Full FTP Testing

By definition, the best measure of performance is performance itself. Therefore, the most direct estimate of your threshold power is to simply do a one-hour time trial. By examining the horizontal graph of the data from such a TT in TrainingPeaks WKO+ (perhaps with a little smoothing applied), you will be able to quickly tell whether your effort was well paced, or if perhaps you started out too hard and then later faded, resulting in an average power somewhat lower than your true threshold power. Entering a local 40k time trial is a great way to get a clean number (make sure you ride the event on your road bike, because TT Bikes can reduce power output).

Since one goal of any training program is to increase power at threshold, you should periodically reassess the FTP value you have entered into TrainingPeaks WKO+ to ensure that it is still accurate. (In particular, an intensity factor of more than 1.05—meaning that normalized power is more than 5% greater than threshold power—during a one-hour mass-start race is often evidence that threshold power is greater than the value entered into the program.) How often threshold power will change depends in part on a cyclist's training history and habits. For example, someone who is just beginning or returning to cycling may see large and rapid changes in threshold power, whereas an experienced rider who has been training for many years and/or maintains a high level of conditioning year-round will probably experience much less variation. In general, though, it is sufficient to assess threshold power a few times per year (near the start of training as a baseline, partway through the pre-competition period to track improvement, and during the season to determine when peak fitness is achieved).



## STEP 2: Establish Training Zones

With more and more cyclists using power meters, there is more demand for power-based training programs like those used with heart rate monitors. To help meet this demand, a series of power-based training levels, or zones, are built directly into TrainingPeaks WKO+ software. These training levels, described below, were developed using principles of exercise physiology and extensive lab and field testing.

### Basis for system/number of levels:

Power at lactate threshold (LT) is the most important physiological determinant of endurance cycling performance, because it integrates VO<sub>2</sub> max, the percentage of VO<sub>2</sub> max that can be sustained for a given duration, and cycling efficiency. Therefore, it is ideal to define training zones according to an athlete's threshold power. Seven different levels represent the full range of physiological responses to power exertion and adequately describe the different types of training required for competitive cycling. The table below lists the primary physiological adaptations expected to result from training at each level, although these will obviously be influenced by initial fitness, the duration of each workout, and time off between each interval.

## POWER TRAINING LEVELS FOR CYCLISTS

Level	Name/purpose	% of threshold power	% of threshold HR	RPE	Time
1	Active recovery	≤55%	≤68%	<2	70-80 years
2	Endurance	56-75%	69-83%	2-3	2.5 hours to 14 days
3	Tempo	76-90%	84-94%	3-4	30min to 8 hours
4	Lactate threshold	91-105%	95-105%	4-5	10 - 60 min.
5	VO <sub>2</sub> max	106-120%	>106%	6-7	3 - 8 min.
6	Anaerobic capacity	121-150%	N/a	>7	30 sec. - 2 min.
7	Neuromuscular power	N/a	N/a	(maximal )	5 - 15 sec.

## POWER TRAINING LEVEL FOR TRIATHLETES

Endurance Corner	RER	Fat	CHO	Lactate	Heart Rate	RPE	Race Distance	Friel	Daniels	Maffetone	Lydiard	% Threshold Power (Coggan)
												<55%
<b>Easy</b>	0.80	67%	33%	~0.7-1.5 mmol/L	65-72%	10	Ironman (novice)	1	Easy		1/4 Effort	
<b>Steady</b>							Ironman (intermediate)					56-75%
				~1.0-2.5 mmol/L	72-80%		Ironman (advanced)	2				
<b>Moderately Hard</b>							13 Ironman (elite)			Max Aerobic	1/2 Effort	76-90%
	0.85	50%	50%	~2-4 mmol/L	80-85%		Half Ironman (intermediate)	3	Marathon Pace			
<b>Threshold</b>	1.00	0%	100%	~3-5 mmol/L	85-92%	15	Half Ironman (advanced)	4	Tempo		3/4 Effort	91-100%
							Olympic	5a				100-105%
<b>VO2max</b>	1.1			~5-15 mmol/L	92-100%	17	5K Run	5b	Intervals		Repetitions	106-120%
				~10-20 mmol/L		19	800m Run	5c	Reps			121-150%
						20	400m Run				Sprint Training	

**Table 1 - Power Based Training Levels (Coggan Power Zones)**

Level	Name	Average Power	Average HR	Perceived Exertion	Description
1	Active Recovery	<55%	<68	<2	"Easy spinning" or "light pedal pressure", i.e., very low level exercise, too low in and of itself to induce significant physiological adaptations. Minimal sensation of leg effort/fatigue. Requires no concentration to maintain pace, and continuous conversation possible. Typically used for active recovery after strenuous training days (or races), between interval efforts, or for socializing.
2	Endurance	56-75%	69-83%	2-3	"All day" pace, or classic long slow distance (LSD) training. Sensation of leg effort/fatigue generally low, but may rise periodically to higher levels (e.g., when climbing). Concentration generally required to maintain effort only at highest end of range and/or during longer training sessions. Breathing is more regular than at level 1, but continuous conversation still possible. Frequent (daily) training sessions of moderate duration (e.g., 2 h) at level 2 possible (provided dietary carbohydrate intake is adequate), but complete recovery from very long workouts may take more than 24 hs.
3	Tempo	76-90%	84-94%	3-4	Typical intensity of fartlek workout, 'spirited' group ride, or briskly moving paceline. More frequent/greater sensation of leg effort/fatigue than at level 2. Requires concentration to maintain alone, especially at upper end of range, to prevent effort from falling back to level 2. Breathing deeper and more rhythmic than level 2, such that any conversation must be somewhat halting, but not as difficult as at level 4. Recovery from level 3 training sessions more difficult than after level 2 workouts, but consecutive days of level 3 training still possible if duration is not excessive and dietary carbohydrate intake is adequate.
4	Lactate Threshold	91-105%	95-105%(may not be achieved during initial phases of effort(s))	4-5	Just below to just above TT effort, taking into account duration, current fitness, environmental conditions, etc. Essentially continuous sensation of moderate or even greater leg effort/fatigue. Continuous conversation difficult at best, due to depth/frequency of breathing. Effort sufficiently high that sustained exercise at this level is mentally very taxing - therefore typically performed in training as multiple 'repeats', 'modules', or 'blocks' of 10-30 min duration. Consecutive days of training at level 4 possible, but such workouts generally only performed when sufficiently rested/recovered from prior training so as to be able to maintain intensity.
5	VO <sub>2</sub> Max	106-120%	>106%	6-7	Typical intensity of longer (3-8 min) intervals intended to increase VO <sub>2</sub> max. Strong to severe sensations of leg effort/fatigue, such that completion of more than 30-40 min total training time is difficult at best. Conversation not possible due to often 'ragged' breathing. Should generally be attempted only when adequately recovered from prior training - consecutive days of level 5 work not necessarily desirable even if possible.
6	Anaerobic Capacity	>121%	N/A	>7	Short (30 s to 3 min), high intensity intervals designed to increase anaerobic capacity. Heart rate generally not useful as guide to intensity due to non-steady-state nature of effort. Severe sensation of leg effort/fatigue, and conversation impossible. Consecutive days of extended level 6 training usually not attempted.
7	Neuromuscular Power	N/A	N/A	* (Maximal)	Very short, very high intensity efforts (e.g., jumps, standing starts, short sprints) that generally place greater stress on musculoskeletal rather than metabolic systems. Power useful as guide, but only in reference to prior similar efforts, not TT pace.

**Table 2 - Expected physiological/performance adaptations resulting from training at levels 1-7:**

	1	2	3	4	5	6	7
Increased plasma volume		✓	✓✓	✓✓✓	✓✓✓✓	✓	
Increased muscle mitochondrial enzymes		✓✓	✓✓✓	✓✓✓✓	✓✓	✓	
Increased lactate threshold		✓✓	✓✓✓	✓✓✓✓	✓✓	✓	
Increased muscle glycogen storage		✓✓	✓✓✓✓	✓✓✓	✓✓	✓	
Hypertrophy of slow twitch muscle fibers		✓	✓✓	✓✓	✓✓✓	✓	
Increased muscle capillarization		✓	✓✓	✓✓	✓✓✓	✓	
Interconversion of fast twitch muscle fibers (type IIb -> type IIa)		✓✓	✓✓✓	✓✓✓	✓✓	✓	
Increased stroke volume/maximal cardiac output		✓	✓✓	✓✓✓	✓✓✓✓	✓	
Increased VO2 Max		✓	✓✓	✓✓✓	✓✓✓✓	✓	
Increased muscle high energy phosphate (ATP/PCR) Stores						✓	✓✓
Increased anaerobic capacity ("lactate tolerance")					✓	✓✓✓	✓
Hypertrophy of fast twitch fibers						✓	✓✓
Increased neuromuscular power						✓	✓✓✓



# EIGHT-WEEK SPRING POWER TRAINING PLAN

By Hunter Allen

# WEEK 1

## Hunter Allen Tips:

Welcome to your first week! This week is designed to give you some intensity early on and then enhance your endurance this weekend. Make sure you are getting in some stretching on a regular basis. Yoga classes or DVDs work great!

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
<b>WEEK 1</b>	Rest Today	Bike : Tempo with AC bursts Planned Time: 1:45:00	Bike : Planned Time: 1:15:00	Rest Today	Bike: Active Recovery Planned Time: 1:00:00	Bike : Endurance Ride with Tempo Planned Time: 3:00:00	Bike: Endurance Ride Planned Time: 2:00:00
	It's your first day of your new training plan!	Workout Description:	Workout Description:	Today is a nice rest day, get in some stretching and yoga. Be sure to hydrate and sleep well.	Workout Description:	Workout Description:	Workout Description:
	Congrats on taking a positive step towards improving your cycling! This plan will really make a difference, but YOU have to do the work! Trust in my plan for you and I know you will make significant improvements in just 8 weeks.	WU: 10-15 minutes working into ENDURANCE Z2 (Power Z2, HR Z2, 2-3 RPE) with 3 x 1-minute fast pedals to wake up legs.  MS: Start out with a 15-minute effort with watts at ENDURANCE ZONE: Z2 (Power Z2, HR Z2, 2-3 RPE) smooth and steady. Then pick up the intensity and complete 1 x 60-minute TEMPO ZONE: Z3 (Power Z3, HR Z3, 3-4 RPE). Do 15 bursts within this hour to watts at ANAEROBIC CAPACITY ZONE: Z6 (Power Z6, HR Z6, <7 RPE) for 30 seconds  CD: 10-15 minutes with watts at ACTIVE RECOVERY ZONE: Z1 (Power Z1, HR Z1, <2 RPE).	WU: 10-15 minutes working from Zone 1 (Power Z1, HR Z1, <2 RPE) training zone into Zone 2 (Power Z2, HR Z2, 2-3 RPE) with 2-3 x 1 minute fast pedals to wake up legs.  MS1: Endurance ride. Set a pace at Zone 2 Endurance (Power Z2, HR Z2, 2-3 RPE) and hold this pace for the prescribed workout time. Focus on riding smooth and staying relaxed. Vary your cadence. Vary terrain.  CD: 5-15 minutes of easy pedaling in Z1 (Power Z1, HR Z1, <2 RPE).		MS: Today is an Active Recovery day targeting ONLY Zone 1 (Power Z1, HR Z1, <2 RPE). Focus on relaxing on the bike and enjoying the ride. If you have to climb some hills try to use easier gear and spin easy. Today is about recovery, so go for easy spin!	WU: 10 minutes working into your ENDURANCE Zone (Power Z2, HR Z2, 2-3 RPE). Then complete 3 sets of 1-minute fast pedals with a 1-minute rest in between to open up legs.  MS1: We're building endurance today! Once warmed up, ride in your ENDURANCE zone Z2 (Power Z2, HR Z2, 2-3 RPE) over flat to rolling terrain. Focus on staying relaxed on the bike and spinning circles while keeping your cadence between 90 and 100. During the first hour of the ride, complete one 30-minute TEMPO effort Z3 (Power Z3, HR Z3, 3-4 RPE) using a gear that results in a cadence of 75-85. Complete the TEMPO effort as close to the end of the ride as possible while still allowing ten minutes for cool-down.  CD: 5-15 minutes of easy pedaling in Z1 (Power Z1, HR Z1, 2 RPE).	WU: 10-15 minutes working from Zone 1 (Power Z1, HR Z1, <2 RPE) training zone into Zone 2 (Power Z2, HR Z2, 2-3 RPE) with 2-3 x 1 minute fast pedals to wake up legs.  MS1: Endurance ride. Set a pace at Zone 2 Endurance (Power Z2, HR Z2, 2-3 RPE) and hold this pace for the prescribed workout time. Focus on riding smooth and staying relaxed. Vary your cadence. Vary terrain.  CD: 5-15 minutes of easy pedaling in Z1 (Power Z1, HR Z1, <2 RPE).
	Each workout has been designed to build on the previous ones, so all workouts are important.  Make it a great week! You are on the right track!						

# WEEK 2

## Hunter Allen Tips:

This is a much more intense week with focus on your FTP, with some solid neuromuscular power work and then more great endurance riding. Be sure you follow the workout on Friday to the letter, so that you'll get the benefit of the big-gear intervals.

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
<b>WEEK 2</b>	Rest Today	Bike: Classic FTP Intervals – 2x10 minutes Planned Time: 1:30:00	Bike: Tempo with NP bursts Planned Time: 1:30:00	Bike: Active Recovery Planned Time: 1:30:00	Bike: Big Gear NP Efforts Planned Time: 1:15:00	Bike: Endurance Ride with Tempo Planned Time: 3:00:00	Bike: Endurance Ride Planned Time: 2:00:00
	A nice day off. Just relax and let the legs, heart and lungs get a break today!	Workout Description:  WU: 10-15 minutes working into ENDURANCE ZONE: Z2 (Power Z2, HR Z2, 2-3 RPE) with 3 x 1-minute fast pedals to wake up legs.  MS1: FTP Builder Intervals. Complete 2 x 10-minute FTP Intervals in your FTP ZONE: Z4 (Power Z4, HR Z4, 4-5 RPE), with 5-10 minutes of rest between each interval. Ride all other times at ENDURANCE ZONE: Z2 (Power Z2, HR Z2, 2-3 RPE). Terrain: Flat to rolling (or steady, low-grade climb if available). Cadence: 85-105.  CD: 10 minutes of easy spinning in your ACTIVE RECOVERY ZONE: Z1 (Power Z1, HR Z1, <2 RPE).	Workout Description:  WU: 10-15 minutes working into ENDURANCE ZONE: Z2 (Power Z2, HR Z2, 2-3 RPE) with 3 x 1-minute fast pedals to wake up legs.  MS1: Complete 1 x 60-minute TEMPO interval in your TEMPO ZONE: Z3 (Power Z3, HR Z3, 3-4 RPE). Within the hour, complete 15 Sprints. Sprints will be 10-15 seconds each. Try to rest for 3-5 minutes in between.  CD: 10 minutes of easy spinning in your ACTIVE RECOVERY ZONE: Z1 (Power Z1, HR Z1, <2RPE).	Workout Description:  MS: Today is an Active Recovery day targeting ONLY Zone 1 (Power Z1, HR Z1, <2 RPE). Focus on relaxing on the bike and enjoying the ride. If you have to climb some hills try to use easier gear and spin easy. Today is about recovery, so go for easy spin!	Workout Description  WU: 15-20 minutes working into ENDURANCE ZONE: Z2 (Power Z2, HR Z2, 2-3 RPE) with 3 x 1-minute fast pedals to wake up legs.  MS1: 10 x 20 seconds with watts at NEUROMUSCULAR POWER ZONE: Z7 (MAX) in the 53:13 or 12, whichever is your biggest gear, keeping cadence below 60rpm and staying seated. The goal is to develop muscle strength from your core. Contract your core abdominal muscles just before this effort and then see if you can bring that force into your legs and push the big gear. Rest for 1 minute between each interval. Spin easy for 5 minutes and then complete MS2.  MS2: 5 minutes easy at Z2 Endurance (Power Z2, HR Z2, 2-3 RPE). Finish with 4 x 20 seconds of fast pedaling and hard effort with watts at Z7 Neuromuscular Power (MAX). Rest for 1:30 between each.  CD: 10 minutes with watts at Z1 Active Recovery (Power Z1, HR Z1, <2 RPE).	Workout Description:  WU: 10 minutes working into your ENDURANCE Zone (Power Z2, HR Z2, 2-3 RPE). Then complete 3 sets of 1-minute fast pedals with a 1-minute rest in between to open up legs.  MS1: We're building endurance today! Once warmed up, ride in your ENDURANCE zone Z2 (Power Z2, HR Z2, 2-3 RPE) over flat to rolling terrain. Focus on staying relaxed on the bike and spinning circles while keeping your cadence between 90 and 100. During the first hour of the ride, complete one 30-minute TEMPO effort Z3 (Power Z3, HR Z3, 3-4 RPE) using a gear that results in a cadence of 75-85. Complete the TEMPO effort as close to the end of the ride as possible while still allowing ten minutes for cool-down.  CD: 5-15 minutes of easy pedaling in Z1 (Power Z1, HR Z1, <2 RPE).	Workout Description:  WU: 10-15 minutes working from Zone 1 (Power Z1, HR Z1, <2 RPE) training zone into Zone 2 (Power Z2, HR Z2, 2-3 RPE) with 2-3 x 1 minute fast pedals to wake up legs.  MS1: Endurance ride. Set a pace at Zone 2 Endurance (Power Z2, HR Z2, 2-3 RPE) and hold this pace for the prescribed workout time. Focus on riding smooth and staying relaxed. Vary your cadence. Vary terrain.  CD: 5-15 minutes of easy pedaling in Z1 (Power Z1, HR Z1, <2 RPE).

# WEEK 3

## Hunter Allen Tips:

Two hard days in a row is important to challenge your cardiovascular system and also your muscular system. Be sure to finish all the work on Thursday. This workout will begin to teach you some great pacing skills. Recover on Friday and you'll be ready for a strong weekend.

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
<b>WEEK 3</b>	Rest Today	Bike: Active Recovery Planned Time: 1:00:00	Bike: Classic FTP Intervals – 2x10 minutes Planned Time: 1:30:00	Bike: Progressive Force Tempo Planned Time: 1:30:00	Bike: Active Recovery Planned Time: 1:00:00	Bike: Endurance with bursts Planned Time: 3:00:00	Bike: Endurance Ride Planned Time: 2:30:00
	Only on your rest days, do you really improve!  Rest days allow the body to recover and adapt from the stress of the workouts.  Rest days are key.	Workout Description:  MS: Today is an Active Recovery day targeting ONLY Zone 1 (Power Z1, HR Z1, <2 RPE). Focus on relaxing on the bike and enjoying the ride. If you have to climb some hills try to use easier gear and spin easy. Today is about recovery, so go for easy spin!	Workout Description:  WU: 10-15 minutes working into ENDURANCE ZONE: Z2 (Power Z2, HR Z2, 2-3 RPE) with 3 x 1-minute fast pedals to wake up legs.  MS1: FTP Builder Intervals. Complete 2 x 10-minute FTP Intervals in your FTP ZONE: Z4 (Power Z4, HR Z4, 4-5 RPE), with 5-10 minutes of rest between each interval. Ride all other times at ENDURANCE ZONE: Z2 (Power Z2, HR Z2, 2-3 RPE). Terrain: Flat to rolling (or steady, low-grade climb if available). Cadence: 85-105.  CD: 10 minutes of easy spinning in your ACTIVE RECOVERY ZONE: Z1 (Power Z1, HR Z1, <2 RPE).	Workout Description:  WU: 10-15 minutes working into ENDURANCE Z2 (Power Z2, HR Z2, 2-3 RPE) with 3 x 1-minute fast pedals to wake up legs.  MS1: Tempo intervals help build aerobic fitness and muscular endurance.  Complete 1 x 60-minute TEMPO ZONE: Z3 (Power Z3, HR Z3, 3-4 RPE) effort. This effort is progressive, meaning we will finish stronger than we start. Break the effort into two 30-minute sections and focus on completing the second 30 minutes at a slightly higher watts average than the first 30 minutes. Try pushing a bigger gear in the second 30 minutes, as well. Terrain: Mixed. Cadence 75-85 (try using one harder-to-pedal gear and one self-selected). Ride all other times at ENDURANCE Z2 (Power Z2, HR Z2, 2-3 RPE) pace  CD: 10-15 minutes of easy spinning in ACTIVE RECOVERY (Power Z1, HR Z1, <2 RPE).	Workout Description:  MS: Today is an Active Recovery day targeting ONLY Zone 1 (Power Z1, HR Z1, <2 RPE). Focus on relaxing on the bike and enjoying the ride. If you have to climb some hills try to use easier gear and spin easy. Today is about recovery, so go for easy spin!	Workout Description:  WU: 10-15 minutes working from Zone 1 (Power Z1, HR Z1, <2RPE) training zone into Zone 2 (000w-000w, 000bpm-000bpm, 2-3 RPE) with 2-3 x 1 minute Fast Pedals to wake up legs.  MS1: Endurance ride. Set a pace at Zone 2 Endurance (Power Z2, HR Z2, 2-3 RPE) and hold this pace for the next 1 hour. Within this hour, do a 10-12 second out-of-the-saddle burst every 3 minutes, targeting over 200% of FTP (MAX). Make sure cadence stays high. Vary terrain.  CD: 5-15 minutes of easy pedaling in Z1 (Power Z1, HR Z1, <2 RPE).	Workout Description:  WU: 10-15 minutes working from Zone 1 (Power Z1, HR Z1, <2 RPE) training zone into Zone 2 (Power Z2, HR Z2, 2-3 RPE) with 2-3 x 1 minute fast pedals to wake up legs.  MS1: Endurance ride. Set a pace at Zone 2 Endurance (Power Z2, HR Z2, 2-3 RPE) and hold this pace for the prescribed workout time. Focus on riding smooth and staying relaxed. Vary your cadence. Vary terrain.  CD: 5-15 minutes of easy pedaling in Z1 (Power Z1, HR Z1, <2 RPE).



# WEEK 4

## Hunter Allen Tips:

This is a rest week! Note that you need ride only three of the seven days. This will really give you a break and make sure that you are ready for the hard training coming in the next three weeks. Get in plenty of stretching and catch up on chores so you are ready to get back at it next week.

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
<b>WEEK 4</b>	Rest Today  This is a rest week. You are going to allow the body to recover, rest, and adapt to the last 3 weeks of stress.  The goal is to have your muscles and heart and mind fresh at the beginning of next week, so you can really do a great week of training.  Go easy this week. You need to be ready for next week!	Bike: Active Recovery Planned Time: 1:15:00  Workout Description:  MS: Today is an Active Recovery day targeting ONLY Zone 1 (Power Z1, HR Z1, <2 RPE). Focus on relaxing on the bike and enjoying the ride. If you have to climb some hills try to use easier gear and spin easy. Today is about recovery, so go for easy spin!	Rest Today  Another day completely off the bike.  Stretching for at least 30-40 minutes today and relaxing.  Eat smart, and don't overdo the portions this week. You'll be hungry, like you are training hard, but since you are resting, you'll want to watch your food intake.	Bike: Active Recovery Planned Time: 1:15:00  Workout Description:  MS: Today is an Active Recovery day targeting ONLY Zone 1 (Power Z1, HR Z1, <2 RPE). Focus on relaxing on the bike and enjoying the ride. If you have to climb some hills try to use easier gear and spin easy. Today is about recovery, so go for easy spin!	Rest Today  You know the drill. Take it easy and rest.	Bike: Endurance Ride with Tempo Planned Time: 2:00:00  Workout Description:  WU: 10 minutes working into your ENDURANCE Zone (Power Z2, HR Z2, 2-3 RPE). Then complete 3 sets of 1-minute fast pedals with a 1-minute rest in between to open up legs.  MS1: We're building endurance today! Once warmed up, ride in your ENDURANCE zone Z2 (Power Z2, HR Z2, 2-3 RPE) over flat to rolling terrain. Focus on staying relaxed on the bike and spinning circles while keeping your cadence between 90 and 100. During the first hour of the ride, complete one 30-minute TEMPO effort Z3 (Power Z3, HR Z3, 3-4 RPE) using a gear that results in a cadence of 75-85. Complete the TEMPO effort as close to the end of the ride as possible while still allowing ten minutes for cool-down.  CD: 5-15 minutes of easy pedaling in Z1 (Power Z1, HR Z1, <2 RPE).	Rest Today  Catch up on stuff around the house, relax in front of the TV, or a good book.

# WEEK 5

## Hunter Allen Tips:

This big week starts out with two hard days. Monday is a short, intense effort focusing on your anaerobic capacity. Tuesday pushes your FTP a little longer, and if you can think you can do three 15-minute efforts, push for a third one. Thursday is a great day to get in some sprints while riding at tempo pace (an excellent race simulation). Strive for 15 sprints! On Saturday, If you have the time, go for 4.5 hours and spend the extra hour at your tempo pace (80-85% of FTP).

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
<b>WEEK 5</b>	Bike: Classic AC Intervals Planned Time: 1:00:00	Bike: Classic FTP Intervals – 2x15 minutes Planned Time: 1:30:00	Bike: Active Recovery Planned Time: 1:15:00	Bike: Tempo with NP bursts Planned Time: 1:30:00	Bike: Active Recovery Planned Time: 1:15:00	Bike: Endurance with Cruise Intervals Planned Time: 3:30:00	Bike: Endurance Ride Planned Time: 2:30:00
	Workout Description:  WU: 10-15 minutes working into ENDURANCE ZONE: Z2 (Power Z2, HR Z1, 2-3 RPE) with 3 x 1-minute fast pedals to wake up legs.  MS1: AC Intervals. Once legs are warm, start intervals with 3 x 2 minutes at 135% of FTP (Power Z6, HR MAX >7 RPE), resting 2 minutes between each interval. Rest for 5 minutes of light pedaling, and then do 3 x 1 minute at 150% of FTP (Power Z6, HR Max, >7 RPE), with 2 minutes of rest in between. Rest for 5 minutes of light pedaling and then do 3 x 30 seconds ALL OUT with 2 minutes in between. Cadence: Self-selected. Terrain: flat to medium grade hill.  CD: 10 minutes of easy spinning in your ACTIVE RECOVERY ZONE: Z1 (Power Z1, HR Z1, <2 RPE).	Workout Description:  WU: 10-15 minutes working into ENDURANCE ZONE: Z2 (Power Z2, HR Z2, 2-3 RPE) with 3 x 1-minute fast pedals to wake up legs.  MS1: FTP Builder Intervals. Complete 2 x 15-minute FTP Intervals in your FTP ZONE: Z4 (Power Z4, HR Z4, 4-5 RPE), with 5-10 minutes of rest between each interval. Ride all other times at ENDURANCE ZONE: Z2 (Power Z2, HR Z2, 2-3 RPE). Terrain: Flat to rolling (or steady, low-grade climb if available). Cadence: 85-105.  CD: 10 minutes of easy spinning in your ACTIVE RECOVERY ZONE: Z1 (Power Z1, HR Z1, <2 RPE).	Workout Description:  MS: Today is an Active Recovery day targeting ONLY Zone 1 (Power Z1, HR Z1, <2 RPE). Focus on relaxing on the bike and enjoying the ride. If you have to climb some hills try to use easier gear and spin easy. Today is about recovery, so go for easy spin!	Workout Description:  WU: 10-15 minutes working into ENDURANCE ZONE: Z2 (Power Z2, HR Z2, 2-3 RPE) with 3 x 1-minute fast pedals to wake up legs.  MS1: Complete 1 x 60-minute TEMPO Interval in your TEMPO ZONE: Z3 (Power Z3, HR Z3, 3-4 RPE). Within the hour, complete 15 Sprints. Sprints will be 10-15 seconds each. Try to rest for 3-5 minutes in between.  CD: 10 minutes of easy spinning in your ACTIVE RECOVERY ZONE: Z1 (Power Z1, HR Z1, <2RPE).	Workout Description:  MS: Today is an Active Recovery day targeting ONLY Zone 1 (Power Z1, HR Z1, <2 RPE). Focus on relaxing on the bike and enjoying the ride. If you have to climb some hills try to use easier gear and spin easy. Today is about recovery, so go for easy spin!	Workout Description:  WU: 10-15 minutes working into your ENDURANCE Zone Z2 (Power Z2, HR Z2, 2-3 RPE). Then complete 3 sets of 1-minute fast pedals with 1-minute rests between to open up legs.  MS1: Build endurance today! Once warmed up, ride in your ENDURANCE Zone Z2 (Power Z2, HR Z2, 2-3 RPE) over flat to rolling terrain. Focus on staying relaxed on the bike and spinning circles while keeping cadence between 90 and 100. During the last 60-90 minutes of the ride (after warm-up), complete 2 CRUISE INTERVALS at FTP watts Z4 (Power Z4, HR Z4, 4-5 RPE) for 15 minutes each, with 10-minute rests between intervals.  CD: 5-15 minutes of easy pedaling in Z1 (Power Z1, HR Z1, <2 RPE).	Workout Description:  WU: 10-15 minutes working from Zone 1 (Power Z1, HR Z1, <2 RPE) training zone into Zone 2 (Power Z2, HR Z2, 2-3 RPE) with 2-3 x 1 minute fast pedals to wake up legs.  MS1: Endurance ride. Set a pace at Zone 2 Endurance (Power Z2, HR Z2, 2-3 RPE) and hold this pace for the prescribed workout time. Focus on riding smooth and staying relaxed. Vary your cadence. Vary terrain.  CD: 5-15 minutes of easy pedaling in Z1 (Power Z1, HR Z1, <2 RPE).

# WEEK 6

## Hunter Allen Tips:

Tuesday is your first shot at VO2 max intervals. Give these everything you've got for the full three minutes. If you are feeling strong that day, do an additional three efforts for a total of six, but make sure you have the time. The sprints on Wednesday are key to developing your "short game", so make sure you get those in, as well. Lastly, you'll want to push hard on the Thursday hill intervals to make it a great week of training. Do two extra hills on Thursday for bonus points!

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
WEEK 6	Rest Today	Bike: Tempo w/VO2Max—45 minutes Planned Time: 1:40:00  Workout Description:  WU: 10-15 minutes working into ENDURANCE Z2 (Power Z2, HR Z2, 2-3 RPE), with 3 x 1-minute fast pedals to wake up legs.  MS1: Tempo intervals help build aerobic fitness and muscular endurance. Complete 1 x 45-minute TEMPO ZONE: Z3 (Power Z3, HR Z3, 3-4 RPE) effort. Terrain: Mixed. Cadence: 75-85 (try using one harder-to-pedal gear and then one self-selected). Ride all other times at ENDURANCE Z2 (Power Z2, HR Z2, 2-3 RPE) pace, flat to low grade climbing. Ride for 10 minutes in ACTIVE RECOVERY Z1, then go on to MS2.  MS2: VO2Max Intervals. Complete 3 x 3-minute in your VO2MAX ZONE: Z5 (Power Z5, HR Z5, 6-7 RPE), with 3-minute rests between intervals.  CD: 10-15 minutes of easy spinning in ACTIVE RECOVERY Z1 (Power Z1, HR Z1, <2 RPE).	Bike: NP Sprints Planned Time: 1:30:00  Workout Description:  WU: 15-20 minutes working into ENDURANCE ZONE: Z2 (Power Z2, HR Z2, 2-3 RPE) with 3 x 1-minute fast pedals to wake up legs.  MS1: 6 x 50-yard Small Ring Sprints (39:16). Start each sprint rolling at about 12 mph in little ring and then spin up to fast pedal power (target cadence 120 and above). Rest 2-3 minutes between sprint efforts. Recover with 5-10 minutes of easy spinning and then complete MS2.  MS2: 3 x 150-yard Middle Ring Sprints (53:17). Start each sprint rolling around 16 mph and then really jump on it. Shift up as 1 time only as you spin out gear. Rest 2-3 minutes between efforts. Recover with 5-10 minutes of easy spinning and then go on to MS3.  MS3: 3 x 250-yard Big Ring Sprints (53:16). Start each sprint rolling around 18 mph and then really get on it. Shift up 2 times till you are at max speed and effort. Sprint for the win!  CD: 10 minutes of easy spinning in your ACTIVE RECOVERY ZONE: Z1 (Power Z1, HR Z1, <2 RPE).	Bike: Hill Cruise Intervals Planned Time: 1:30:00  Workout Description:  WU: 10-15 minutes working into ENDURANCE ZONE: Z2 (Power Z2, HR Z2, 2-3 RPE) with 3 x 1-minute fast pedals to wake up legs.  MS: Climb a 6- to 8-minute hill (4-6% grade) 3-4 times at TOP of FTP ZONE: Z4 (Power Z4, HR Z4, 4-5 RPE). Seated, smooth pedaling targeting 60+ rpm.  CD: 10 minutes with watts in Z1 Active Recovery (Power Z1, HR Z1, <2 RPE).	Rest Today  Just stretching and relaxing today!  Eat smart and make sure you get enough Complex carbs today.	Bike: Endurance with Cruise Intervals Planned Time: 3:30:00  Workout Description:  WU: 10-15 minutes working into your ENDURANCE Zone Z2 (Power Z2, HR Z2, 2-3 RPE). Then complete 3 sets of 1-minute fast pedals with 1-minute rests between to open up legs.  MS1: Build endurance today! Once warmed up, ride in your ENDURANCE Zone Z2 (Power Z2, HR Z2, 2-3 RPE) over flat to rolling terrain. Focus on staying relaxed on the bike and spinning circles while keeping cadence between 90 and 100. During the last 60-90 minutes of the ride (after warm-up), complete 3 CRUISE INTERVALS at FTP watts Z4 (Power Z4, HR Z4, 4-5 RPE) for 15 minutes each, with 10-minute rests between intervals.  CD: 5-15 minutes of easy pedaling in Z1 (Power Z1, HR Z1, <2 RPE).	Bike: Endurance Ride Planned Time: 2:00:00  Workout Description:  WU: 10-15 minutes working from Zone 1 (Power Z1, HR Z1, <2 RPE) training zone into Zone 2 (000w-000w, 000bpm-000bpm, 2-3 RPE) with 2-3 x 1 minute fast pedals to wake up legs.  MS1: Endurance ride. Set a pace at Zone 2 Endurance (Power Z2, HR Z2, 2-3 RPE) and hold this pace for the prescribed workout time. Focus on riding smooth and staying relaxed. Vary your cadence. Vary terrain.  CD: 5-15 minutes of easy pedaling in Z1 (Power Z1, HR Z1, <2 RPE).

# WEEK 7

## Hunter Allen Tips:

Your fitness is improving! I know you can feel it! Your FTP and endurance efforts should both feel like they are getting easier and easier. You might have to bump up the watts a little this week in order to still feel like you are working hard. On Tuesday, strive again for three 15-minute intervals; a little extra this week will be good for you. Also, your Saturday ride is key. Really go for it! I want you to finish tired!

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
WEEK 7	Rest Today	Bike: Classic FTP Intervals – 2x15 minutes Planned Time: 1:30:00	Bike: Progressive Force Tempo Planned Time: 1:30:00	Bike: Active Recovery Planned Time: 1:15:00	Bike: Tempo with NP bursts Planned Time: 1:30:00	Bike: Endurance w/attacks and Tempo Home Planned Time: 4:00:00	Bike: Endurance Ride Planned Time: 2:00:00
	Just let the legs relax and take it easy today!	Workout Description:  WU: 10-15 minutes working into ENDURANCE ZONE: Z2 (Power Z2, HR Z2, 2-3 RPE) with 3 x 1-minute fast pedals to wake up legs.  MS1: FTP Builder Intervals. Complete 2 x 15-minute FTP Intervals in your FTP ZONE: Z4 (Power Z4, HR Z4, 4-5 RPE), with 5-10 minutes of rest between each interval. Ride all other times at ENDURANCE ZONE: Z2 (Power Z2, HR Z2, 2-3 RPE). Terrain: Flat to rolling (or steady, low-grade climb if available). Cadence: 85-105.  CD: 10 minutes of easy spinning in your ACTIVE RECOVERY ZONE: Z1 (Power Z1, HR Z1, <2 RPE).	Workout Description:  WU: 10-15 minutes working into ENDURANCE Z2 (Power Z2, HR Z2, 2-3 RPE) with 3 x 1-minute fast pedals to wake up legs.  MS1: Tempo intervals help build aerobic fitness and muscular endurance.  Complete 1 x 60-minute TEMPO ZONE: Z3 (Power Z3, HR Z3, 3-4 RPE) effort. This effort is progressive, meaning we will finish stronger then we start. Break the effort into two 30-minute sections and focus on completing the second 30 minutes at a slightly higher watts average than the first 30 minutes. Try pushing a bigger gear in the second 30 minutes, as well. Terrain: Mixed. Cadence 75-85 (try using one harder-to-pedal gear and one self-selected). Ride all other times at ENDURANCE Z2 (Power Z2, HR Z2, 2-3 RPE) pace  CD: 10-15 minutes of easy spinning in ACTIVE RECOVERY Z1 (Power Z1, HR Z1, <2 RPE).	Workout Description:  MS: Today is an Active Recovery day targeting ONLY Zone 1 (Power Z1, HR Z1, <2 RPE). Focus on relaxing on the bike and enjoying the ride. If you have to climb some hills try to use easier gear and spin easy. Today is about recovery, so go for easy spin!	Workout Description:  WU: 10-15 minutes working into ENDURANCE ZONE: Z2 (Power Z2, HR Z2, 2-3 RPE) with 3 x 1-minute fast pedals to wake up legs.  MS1: Complete 1 x 60-minute TEMPO Interval in your TEMPO ZONE: Z3 (Power Z3, HR Z3, 3-4 RPE). Within the hour, complete 15 Sprints. Sprints will be 10-15 seconds each. Try to rest for 3-5 minutes in between.  CD: 10 minutes of easy spinning in your ACTIVE RECOVERY ZONE: Z1 (Power Z1, HR Z1, <2RPE).	Workout Description:  WU: 15 minutes and getting the legs ready with watts at Z2 Endurance (Power Z2, HR Z2, 2-3 RPE).  MS1: Today you need to just ride and have fun. Complete the work, and make sure to stay hydrated and strong throughout. Keep your watts at Z2 Endurance (Power Z2, HR Z2, 2-3 RPE) in the first hour and then try to stay within Z2 Endurance/Z3 Tempo (Power Z2/3, HR Z2/3, 3-4 RPE) for the next 2 hours. During these 2 hours you must do a short 10-second sprint (53:17) with watts at Z7 Neuromuscular Power every 5 minutes, for a total of 24 sprints. Then go on to MS2:  MS2: Stop at a store an hour from home and drink a Red Bull or a Coke. In the last half hour, do your best and try to ride at Z3 Tempo (Power Z3, HR Z3, 3-4 RPE), keeping a nice strong pace.  CD: make sure to pedal easy for 10-15 minutes before you get home, with watts at Z1 Active Recovery (Power Z1, HR Z1, <2 RPE).	Workout Description:  WU: 10-15 minutes working from Zone 1 (Power Z1, HR Z1, <2 RPE) training zone into Zone 2 (000w-000w, 000bpm-000bpm, 2-3 RPE) with 2-3 x 1 minute fast pedals to wake up legs.  MS1: Endurance ride. Set a pace at Zone 2 Endurance (Power Z2, HR Z2, 2-3 RPE) and hold this pace for the prescribed workout time. Focus on riding smooth and staying relaxed. Vary your cadence. Vary terrain.  CD: 5-15 minutes of easy pedaling in Z1 (Power Z1, HR Z1, <2 RPE).

# WEEK 8

## Hunter Allen Tips:

Congrats! You have made it through the eight weeks! This week is a rest week. I recommend re-testing yourself on either Saturday or Sunday. Just repeat the FTP test that I described earlier in the document. That will let you know exactly how much you have improved! Again, it is very important that you rest this week. Then you'll be both fit and rested for your target race!

What's next? Hiring a coach is the best way to get to the next level! Not ready for a coach? Have a look at my other pre-built training plans on [www.TrainingPeaks.com/hunter](http://www.TrainingPeaks.com/hunter). Shoot me an email if you have any questions and I'll be glad to help ([info@peakscoachinggroup.com](mailto:info@peakscoachinggroup.com)). Way to go!

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
<b>WEEK 8</b>	Rest Today	Bike: Active Recovery Planned Time: 1:15:00	Rest Today	Bike: Active Recovery Planned Time: 1:15:00	Rest Today	Bike : Endurance Ride with Tempo Planned Time: 2:00:00	Rest Today
	This is your 2nd rest week in this plan.  Again, it's highly important that you take it easy this week. The goal is to have your muscles and heart and mind fresh at the beginning of next week, so you can really do a great week of training.  Go easy this week. You need to be ready for the next higher plan! Your threshold will increase this week as a result of the rest, so you should be ready for the next higher plan!	Workout Description:  MS: Today is an Active Recovery day targeting ONLY Zone 1 (Power Z1, HR Z1, <2 RPE). Focus on relaxing on the bike and enjoying the ride. If you have to climb some hills try to use easier gear and spin easy. Today is about recovery, so go for easy spin!	Another day completely off the bike.  Stretching for at least 30-40minutes today and relaxing.  Eat smart, and don't overdo the portions this week. You'll be hungry, like you are training hard, but since you are resting, you'll want to watch your food intake.	Workout Description:  MS: Today is an Active Recovery day targeting ONLY Zone 1 (Power Z1, HR Z1, <2 RPE). Focus on relaxing on the bike and enjoying the ride. If you have to climb some hills try to use easier gear and spin easy. Today is about recovery, so go for easy spin!	You know the drill. Take it easy and rest.	Workout Description:  WU: 10 minutes working into your ENDURANCE Zone (Power Z2, HR Z2, 2-3 RPE). Then complete 3 sets of 1-minute fast pedals with a 1-minute rest in between to open up legs.  MS1: We're building endurance today! Once warmed up, ride in your ENDURANCE zone Z2 (Power Z2, HR Z2, 2-3 RPE) over flat to rolling terrain. Focus on staying relaxed on the bike and spinning circles while keeping your cadence between 90 and 100. During the first hour of the ride, complete one 30-minute TEMPO effort Z3 (Power Z3, HR Z3, 3-4 RPE) using a gear that results in a cadence of 75-85. Complete the TEMPO effort as close to the end of the ride as possible while still allowing ten minutes for cool-down.  CD: 5-15 minutes of easy pedaling in Z1 (Power Z1, HR Z1, <2 RPE).	Catch up on stuff around the house, relax in front of the TV, or a good book.

# APPENDIX

## Normalized Power (NP), Intensity Factor (IF), and Training Stress Score (TSS)\*

\*Normalized Power™ (NP), Intensity Factor™ (IF), and Training Stress Score™ (TSS) are trademark metrics of TrainingPeaks.

By Andrew R. Coggan, Ph.D

One of the first things that catches the attention of any new power meter user is how variable, or “jumpy”, power output tends to be. This is largely due to the constantly changing resistances (like small changes in elevation and gusts of wind) that must be overcome when cycling outdoors. Because of this variability, training with a power meter is not directly comparable to training with a heart rate monitor. In particular, it is very difficult and counterproductive to try to keep power constant within a certain range, or zone, at all times during a training session. Power variability means that the overall average power for a ride or part of a ride is often a poor indicator of the actual intensity of the effort. This is especially true in races, where power can vary dramatically from one moment to the next (for example, if a rider first tries to conserve energy and then attacks).

To account for power variability, TrainingPeaks WKO+ uses a special algorithm to calculate an adjusted or *normalized power* for each ride or segment of a ride (longer than 30 seconds). This algorithm is somewhat complicated, but the important point is that it accounts for two physiological phenomena: 1) the physiological responses to rapid changes in exercise intensity are not instantaneous, but follow a predictable time course; 2) many critical physiological responses (for example, glycogen utilization, lactate production, and stress hormone levels) change curvilinearly rather than linearly. By taking these factors into account, normalized power provides a better measure of the true demands of a given training session than raw power. In essence, it is an estimate of the power that you could have maintained for the same physiological “cost” if your power output had been perfectly constant (as on a stationary cycle ergometer).

Keeping track of normalized power is therefore a more accurate way of quantifying the actual intensity of your training sessions or races. For example, it is common for average power to be lower during criteriums than during road races that feel equally difficult because of the time spent soft-pedaling or coasting through sharp turns. Assuming that they are about the same duration, however, the normalized power for both types of events will generally be very similar, reflecting their equivalent intensity. In fact, normalized power during a *hard* hour-long criterium or road race will often be similar to what a rider can average when pedaling continuously in a flat 40k time trial. The normalized power from mass-start races can therefore often be used to provide an initial estimate of a rider’s threshold power (see below).

Although normalized power is a better measure of training intensity than average power, it does not account for differences in fitness within or between individuals. TrainingPeaks WKO+ therefore also calculates an *intensity factor (IF)* for every workout or time range analyzed. IF is simply the ratio of normalized power as described above to your threshold power (entered under “Athlete Settings” on your “Athlete Home” page). For example, if your normalized power for a long training ride early in the year is 210W and your threshold power at that time is 280W, then the IF for that workout would be 0.75.

However, if you did that same exact ride later in the year after your threshold power had risen to 300W, then the IF would be lower, say, around 0.70. IF therefore provides a valid and convenient way of comparing the relative intensity of training sessions or races either over time or between riders, accounting for changes or differences in threshold power. Typical IF values for various training sessions or races are as follows:

- Recovery rides: less than 0.75
- Endurance-paced training rides: 0.75-0.85
- Tempo rides, aerobic and anaerobic interval workouts (work and rest periods combined), longer road races (at least 2.5 hours): 0.85-0.95
- Lactate threshold intervals (work period only), shorter road races (under 2.5 hours): 0.95-1.05
- Shorter TTs (around 15km), track points races: 1.05-1.15
- Prologue TT, track pursuit, track miss-and-out: 1.15

**Note that one particularly useful application of IF is to check for changes in threshold power. Specifically, an IF of more than 1.05 for a race that is approximately one hour long is often a sign that the rider's threshold power is actually greater than that presently entered into the program.** Thus, by simply examining a rider's IF for various events during the course of a season, increases or decreases in threshold power are often observable without the need for frequent formal testing.

While exercise intensity is clearly an important factor in determining the type and magnitude of physiological adaptations to training, exercise frequency and duration—which together determine overall training volume—are important factors, as well. However, there is obviously an interaction between training intensity and volume: at some point, as intensity goes up volume must come down and vice versa, or else you will become over-trained. To quantify your overall training load and hopefully help avoid such a situation, TrainingPeaks WKO+ uses your power data to calculate a *training stress score (TSS)* for every workout and provides a graphical summary of your recent TSS on your Athlete Home Page. TSS, which is modeled after Dr. Eric Bannister's heart rate-based training impulse (TRIMPS), takes into account both the intensity (IF) and the duration of each training session, and serves as a predictor of the amount of glycogen used in each workout. Thus, a very high TSS resulting from a single race or training session indicates that one or more rest days should be scheduled. Although athletes with different training backgrounds and natural abilities can tolerate different amounts of training, the scale below is an approximate translation of TSS into perceived fatigue:

- Less than 150: low fatigue (recovery generally complete by following day)
- 150-300: medium fatigue (some residual fatigue may be present the next day, but gone by second day)
- 300-450: high fatigue (some residual fatigue may be present even after two days)
- Greater than 450: very high fatigue (residual fatigue lasting several days is likely)

Cumulative TSS per week or per month can also be used help identify the maximum intensity and volume of training that still leads to improvements rather than to overtraining.



By allowing convenient tracking of normalized power, IF, and TSS for each workout and over time, TrainingPeaks WKO+ provides both individual athletes and coaches with a powerful tool for analyzing the enormous amount of data you can record with a power meter. The results of such analyses can serve as the springboard for improvements in training and, ultimately, race performance.