

## **POWER ZONE TRAINING WORKSHOP, MONTEREY SPORTS CENTER, JANUARY 18, 2023**

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### **Power Zone Training History:**

Power Zone Training is a well-developed and research-backed method of training from experts in the field, namely Dr. Andrew Coggan, Hunter Allen and Joe Friel. There are 7 zones of intensity, or zones in Power Zone Training. Research has shown that this method allows athletes of all fitness levels achieve specific physiological adaptations from their training. The Stages Cycling Program paired Power Zone Training with their highly accurate power meters to help instructors create intelligent, individualized training workouts for riders. The power meter on each bike is located on the left pedal.

### **FTP & the FTP Test:**

The metrics that the Stages power meter provides is the foundation of Power Zone Training. The two metrics, Watts and RPM (Rate of Pedal Stroke Revolutions per Minute) are the focal points.

Watts = Power = Resistance

RPM = Speed = Cadence

The terms are interchangeable; they mean the same thing. The Stages console displays the metrics through a blue tooth system. The right-hand column gives real time metrics and the left-hand column gives overall average metrics. Hit the middle "Stage" button three times to get to a Stage screen. Power Zone Training is based on your FTP (Functional Threshold Power) test result. Your FTP is the highest average power (resistance, watts) you can sustain for the length of the test. Keep in mind that both weight and gender play a role in your FTP test result. There is an FTP test programmed in every Stages Cycling class. The longer the FTP test, the more accurate it is. Traditional Power Zone Training FTP test results are based on a 20-minute FTP test which is 95% accurate. Because it would take the whole class to do a traditional FTP test, Stages shortened the FTP test and the accuracy percentages. The program figures out your zones based on the length of your FTP after the test is completed.

3-Minute FTP: 80% accuracy (the FTP result is multiplied by .80 to get a more accurate FTP, then the zones are calculated)

1-Minute FTP: 70% accuracy

Most classes insert a 1 or 3-minute FTP test in their class plan. With that said, it takes a few times to figure out how hard to push during the test so your zones are accurate. The Stages Program sets the FTP default at 150 watts and the 7 power zones are preset to a 150 FTP test result until you do the actual FTP test. The best way to gauge intensity or zones before you take the FTP test is by rate of perceived exertion; on a scale from 1-7, 1 is easy and 7 is the hardest. The instructor will explain how you should be feeling in each zone. Remember, until you complete the actual FTP test, power zones are preset based on a 150 FTP test result and do not represent your level of fitness. Once you complete the FTP test, the Stages program calculates your FTP and configures your power zones based on the FTP test result. Each zone represents a percentage of your FTP.

### **Examining the Power Zones:**

**ZONE 1, ACTIVE RECOVERY:** RPE (rate of perceived exertion) is 1 (on a scale from 1-7). This zone range is 55% or less of your FTP. It feels very easy and is powered by the body's aerobic system relying on type 1 (slow twitch) muscle fibers. You could spend all day in this zone. It is mainly used as rest intervals between hard efforts to catch your breath, lower your heart rate, and flush your legs out.

**ZONE 2, ENDURANCE:** RPE is 2 on a scale from 1-7. This zone range is 56-75% of your FTP. It is a light effort that is powered by the aerobic system and type 1 muscle fibers. Zone 2 stimulates more adaptation and creates a bit more fatigue than zone 1 but you still could spend hours in this zone. Riding in Zone 2 teaches your body to burn fat as a fuel source and encourages your body to produce more mitochondria, which help improve your aerobic capacity.

**ZONE 3, TEMPO:** RPE is 3 on a scale from 1-7. This zone range is 76-90% of your FTP. It is still primarily aerobic in effort but riding at this intensity begins to recruit type 2 (fast twitch) muscle fibers. This is the first zone that feels challenging to sustain over long periods of time as it adds some muscular endurance demands. It's a moderate effort that you could sustain up to 3 hours. Training in Zone 3 has many of the advantages of riding in Zone 2 but with more pronounced effects, particularly in improving the ability of the muscle to store glycogen.

**ZONE 4, THRESHOLD:** RPE is 4 on a scale from 1-7. This zone is challenging. This zone range is 91-105% of your FTP. It is where you will find your FTP test result. It's an uncomfortable effort that you could only sustain for 30-60 minutes. Riding at threshold shifts fuel demands from fat to sugar. It activates a large number of type 2 (fast twitch) muscle fibers. Working in this zone improves the muscle's ability to move lactate away from the working muscles to other parts of the body where it can be oxidized to produce energy. This helps improve FTP and the ability to maintain high intensities for longer periods of time.

**ZONE 5, VO2 MAX:** RPE is 5 on a scale from 1-7. This zone range is 106-120% of your FTP. It is a hard effort that you could only sustain for about 8 minutes max. The term VO2 max refers to the maximum amount of oxygen your body uses during exercise. Riding in Zone 5 relies primarily on type 2 muscle fibers and places high demand on both the aerobic and anaerobic capacities. Training in this zone will improve your VO2 max and increase your ability to ride harder for longer periods of time.

**ZONE 6, ANAEROBIC CAPACITY:** RPE is a 6 out of 7. This zone range is 121-150% of your FTP. It's a very hard effort that you could only sustain for 3 minutes or less. Efforts are higher force and shorter duration relying on type 2 muscle fiber and your anaerobic energy system. Zone 6 training is used to increase anaerobic power by improving the rate of glycolysis.

**ZONE 7, NEUROMUSCULAR POWER:** RPE 7-7. This zone range is over 151% of your FTP. It's an everything you have effort that you could only sustain **up to** 30 seconds. Efforts are very short bursts. This is where power for a sprint finish is developed. A sprint is NOT speed based, it is power based.

### **Bike Set-Up:**

Basic guidelines. Seat height, handlebar height, distance from handlebars, resistance knob, sprint lever.

### **The Ride:**

Our ride today is 40 minutes. We will spend about 10 minutes warming up before doing a one-minute FTP test. Then, we will spend time in all seven training zones so you can get a feel for each zone. Keep in mind, if zones 4-7 are not challenging, you went too easy on your FTP test. If they feel too hard, you pushed too hard. It takes about 4 classes to really figure out how to do the FTP test correctly for you. The great thing about the Stages program is that your FTP changes as you need it to change in any given ride. You can also lock in an FTP and have it as your default if you want to train at the same FTP in every ride. You will need to download the app (STAGESSTUDIO+), set up your account and book your bike through the app for this to occur.

