

20 minute ftp test calculation

20 minute ftp test calculation is a crucial method used by cyclists and endurance athletes to determine their Functional Threshold Power (FTP), which reflects the highest power output one can sustain over an hour. This calculation allows athletes to tailor their training zones accurately, improving performance and endurance. Understanding how to conduct a 20 minute FTP test and correctly calculate the FTP value is essential for effective training plans and tracking progress. This article explores the principles behind the 20 minute FTP test calculation, step-by-step instructions on performing the test, the mathematical formulas involved, and practical applications. Additionally, it delves into tips for maximizing test accuracy and interpreting results to optimize training outcomes.

- Understanding the 20 Minute FTP Test
- Performing the 20 Minute FTP Test
- Calculating FTP from the 20 Minute Test Data
- Using FTP to Define Training Zones
- Tips for Accurate 20 Minute FTP Test Calculation

Understanding the 20 Minute FTP Test

The 20 minute FTP test is a widely recognized protocol for estimating an athlete's Functional Threshold Power without requiring a full one-hour effort. FTP represents the maximum average power output an individual can maintain for approximately 60 minutes, and it serves as a benchmark for endurance performance. Because a full hour-long test can be physically demanding and time-

consuming, the 20 minute test offers a practical alternative that approximates FTP by assessing power output over a shorter duration.

Concept of Functional Threshold Power

Functional Threshold Power is a critical metric in cycling and endurance sports, indicating the intensity level an athlete can sustain without fatiguing rapidly. FTP is used to set training intensities, monitor improvements, and compare performance across different periods or athletes. It is usually expressed in watts and normalized for body weight (watts per kilogram) for better individual assessment.

Why Use a 20 Minute FTP Test Instead of a 60 Minute Test?

While the 60 minute FTP test is the most direct measurement, it demands a high level of mental and physical endurance, which can be challenging to replicate regularly. The 20 minute test offers a more manageable effort duration while still providing a reliable estimation of FTP. This shorter test is less taxing and easier to incorporate into regular training schedules.

Performing the 20 Minute FTP Test

Carrying out the 20 minute FTP test requires proper preparation, execution, and environmental consistency to ensure the results are valid. A structured approach helps athletes achieve their maximum sustainable effort for the test duration, which is critical for accurate FTP calculation.

Preparation Before the Test

Before starting the test, athletes should ensure they are well-rested, hydrated, and have avoided intense workouts for at least 24 hours. A warm-up phase of 15 to 20 minutes is essential to elevate heart rate and prime muscles for the sustained effort.

Test Execution Steps

1. Begin with a 15-20 minute warm-up, including some short bursts to activate the cardiovascular system.
2. Start the 20 minute all-out effort, aiming to maintain the highest average power possible without burning out prematurely.
3. Maintain a consistent pacing strategy, starting at a sustainable intensity and increasing slightly if energy allows.
4. Record power data throughout the test using a power meter or smart trainer.
5. Finish with a cool-down period to aid recovery.

Calculating FTP from the 20 Minute Test Data

Once the 20 minute power data is collected, the FTP calculation involves applying a correction factor to estimate the equivalent one-hour power output. This step converts the shorter effort data into a standardized metric used for training and performance analysis.

Determining Average Power During the Test

The first step in the 20 minute FTP test calculation is to find the average power output sustained over the entire 20 minutes. This average is typically displayed by most cycling computers or software that record power data.

Applying the Correction Factor

Because the 20 minute test is shorter than the actual FTP duration, the average power is adjusted downward to estimate the FTP. The most commonly used formula is:

- $FTP = \text{Average 20-minute power} \times 0.95$

This 95% factor compensates for the natural decline in power output that would occur if the effort were extended to 60 minutes. It is based on extensive research and empirical testing within the cycling community.

Using FTP to Define Training Zones

Calculating FTP accurately enables athletes to establish personalized training zones, which guide workout intensity and optimize training effects. These zones are fundamental for structured training plans that target specific physiological adaptations.

Common FTP-Based Training Zones

Training zones based on FTP are often categorized as follows:

- **Zone 1 (Active Recovery):** *Less than 55% of FTP*
- **Zone 2 (Endurance):** *56-75% of FTP*
- **Zone 3 (Tempo):** *76-90% of FTP*
- **Zone 4 (Threshold):** *91-105% of FTP*
- **Zone 5 (VO2 Max):** *106-120% of FTP*

- **Zone 6 (Anaerobic Capacity):** *121-150% of FTP*
- **Zone 7 (Neuromuscular Power):** *Maximal efforts*

These zones help athletes target endurance, stamina, power, and recovery during training sessions, making FTP a cornerstone of modern cycling training methodologies.

Tips for Accurate 20 Minute FTP Test Calculation

To ensure the 20 minute FTP test calculation is as precise as possible, athletes should follow specific guidelines both before and during the test. Proper execution maximizes the reliability of the FTP estimation.

Environmental and Equipment Considerations

Use a calibrated power meter or smart trainer to record power data accurately. Conduct the test under consistent environmental conditions, such as temperature and terrain, as these factors can affect performance and power readings.

Physical and Mental Preparation

Rest adequately in the days leading up to the test to avoid fatigue. Develop a pacing strategy to prevent early burnout and maintain a steady effort. Mental focus is critical to pushing through the 20 minutes at a maximal sustainable pace.

Repeat Testing and Tracking Progress

Perform the 20 minute FTP test regularly, such as every 6 to 8 weeks, to track fitness improvements

and adjust training zones accordingly. Consistency in test conditions and preparation enhances the comparability of results over time.

Frequently Asked Questions

What is a 20 minute FTP test?

A 20 minute FTP (Functional Threshold Power) test is a cycling performance test where a rider pedals as hard as possible for 20 minutes to measure their average power output, which is then used to estimate their FTP.

How do you calculate FTP from a 20 minute test?

To calculate FTP from a 20 minute test, take the average power output during the 20 minutes and multiply it by 0.95 (95%). This adjusted value estimates your FTP.

Why multiply by 0.95 when calculating FTP from a 20 minute test?

Multiplying by 0.95 accounts for the fact that the 20 minute test is slightly shorter than the one-hour duration that FTP represents, providing a more accurate estimate of sustainable power over an hour.

Is the 20 minute FTP test accurate?

The 20 minute FTP test is a widely accepted and practical method to estimate FTP, but it may slightly overestimate FTP compared to a full one-hour test. It's a good balance between accuracy and feasibility.

Can I use average power or normalized power for the 20 minute FTP test calculation?

It is recommended to use the average power during the 20 minute test to calculate FTP. Normalized power accounts for power variability but average power is standard for FTP calculation.

How should I prepare for a 20 minute FTP test?

To prepare for a 20 minute FTP test, ensure you are well-rested, hydrated, and warmed up properly. Avoid heavy training the day before and perform a proper warm-up before the test.

Can the 20 minute FTP test be done indoors on a trainer?

Yes, the 20 minute FTP test can be performed indoors on a smart trainer or power meter-equipped bike, making it convenient and controlled for consistent results.

How often should I perform a 20 minute FTP test?

It is recommended to perform a 20 minute FTP test every 6 to 8 weeks to track fitness progress and adjust training zones accordingly.

What is the formula to calculate FTP from a 20 minute test in watts?

$\text{FTP (watts)} = \text{Average Power during 20 minute test} \times 0.95$. For example, if your average power is 250 watts, then $\text{FTP} = 250 \times 0.95 = 237.5$ watts.

Additional Resources

1. *Mastering the 20-Minute FTP Test: A Practical Guide*

This book offers a comprehensive approach to understanding and performing the 20-minute Functional Threshold Power (FTP) test. It covers the physiological principles behind FTP, detailed test protocols, and how to accurately calculate and interpret your results. Readers will also find tips on test preparation and post-test training adjustments. Ideal for cyclists and coaches aiming to optimize performance through precise FTP measurement.

2. *FTP Testing and Power Calculation for Cyclists*

Focusing on power-based training, this book delves into the methods for conducting FTP tests, including the popular 20-minute test. It explains the mathematics behind FTP calculation and how to

use these numbers to tailor training plans. Clear diagrams and real-world examples make complex concepts accessible to athletes at all levels.

3. The Science of FTP: Calculations and Applications

Explore the scientific underpinnings of FTP testing with this detailed resource. It breaks down the physiological markers that define FTP and demonstrates how the 20-minute test can be used to estimate it accurately. The book also discusses common pitfalls in calculation and interpretation, guiding readers to more reliable results.

4. 20-Minute FTP Test: Step-by-Step Protocols and Analysis

This manual provides a step-by-step walkthrough for conducting the 20-minute FTP test, including warm-up routines, pacing strategies, and environmental considerations. It guides readers through the calculation process and explains how to analyze the data to inform training decisions. Athletes will benefit from practical advice to maximize test accuracy.

5. Training with Power: FTP Test Calculation and Beyond

Learn how to integrate FTP testing into a broader power-based training regimen with this insightful book. It covers the calculation of FTP from the 20-minute test and how to use this metric to structure workouts and monitor progress. The author also discusses software tools and technology that can aid in precise FTP assessment.

6. Applied Physiology and FTP Test Calculations

Bridging exercise science and practical testing, this book examines the physiological factors influencing FTP results. It provides detailed methods for calculating FTP from the 20-minute test and interpreting these numbers in the context of an athlete's overall fitness. Useful for sports scientists, coaches, and dedicated cyclists seeking an evidence-based approach.

7. FTP Testing Essentials: From Calculation to Training Zones

This guide focuses on translating FTP test results into meaningful training zones and plans. After explaining the 20-minute FTP test and calculation methods, it details how to apply these findings to improve endurance, speed, and recovery. It is an essential read for athletes wanting to optimize their

training intensity.

8. *Efficient FTP Test Calculations for Competitive Cyclists*

Designed for competitive cyclists, this book emphasizes efficiency and accuracy in performing and calculating the 20-minute FTP test. It offers strategies to minimize errors and maximize the validity of test results. The text also explores how to adjust training loads based on FTP changes over time.

9. *The Ultimate Guide to FTP Testing and Data Interpretation*

This comprehensive guide covers all aspects of FTP testing, with a special focus on the 20-minute test protocol and calculation techniques. It provides in-depth advice on interpreting FTP data, troubleshooting test inconsistencies, and using results to enhance performance. Coaches and athletes alike will find valuable insights to refine their training approaches.

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20 minute ftp test calculation: *The Triathlete Guide to Sprint & Olympic Triathlon Racing*
Chris Foster, Ryan Bolton, 2020-04-07 The Triathlete Guide to Sprint and Olympic Triathlon Racing will help you discover the speed, thrill, and challenge of triathlon's most popular race distances. Not everyone has time to train for long-course triathlons. By pursuing triathlon's shorter distances, you can enjoy all the total body fitness benefits of the swim-bike-run sport and discover the unique challenges of short-course racing all while enjoying a life outside of training. This complete guide from former pro triathletes Chris Foster and coach Ryan Bolton shares all the know-how you need to find speed and enjoy successful racing in sprint and Olympic-distance triathlons. Foster, now the Senior Editor of Triathlete magazine, shares his pro advice for how to set a smart race strategy, how to master triathlon pacing, how to execute fast transitions, how to train to improve your weakness and race to your strengths. Bolton offers smart, effective sprint and Olympic triathlon training plans so you can get started right away, no matter your background. Sprint and Olympic triathlons are triathlon's most popular distances for good reasons. Experienced triathletes returning to the short course will enjoy a break from long, slow hours of training and rediscover the joy of speed. Active people looking for a new challenge can jump right into triathlon's most beginner-friendly distances. The Triathlete Guide to Sprint and Olympic Triathlon Racing makes it simple to get back up to speed in the world's most rewarding endurance sport.

20 minute ftp test calculation: *Intelligent Data Engineering and Automated Learning - IDEAL 2023* Paulo Quaresma, David Camacho, Hujun Yin, Teresa Gonçalves, Vicente Julian, Antonio J.

Tallón-Ballesteros, 2023-11-14 This book constitutes the proceedings of the 24th International Conference on Intelligent Data Engineering and Automated Learning, IDEAL 2023, held in Évora, Portugal, during November 22-24, 2023. The 45 full papers and 4 short papers presented in this book were carefully reviewed and selected from 77 submissions. IDEAL 2023 is focusing on big data challenges, machine learning, deep learning, data mining, information retrieval and management, bio-/neuro-informatics, bio-inspired models, agents and hybrid intelligent systems, and real-world applications of intelligence techniques and AI. The papers are organized in the following topical sections: main track; special session on federated learning and (pre) aggregation in machine learning; special session on intelligent techniques for real-world applications of renewable energy and green transport; and special session on data selection in machine learning.

20 minute ftp test calculation: *The Secret of Cycling* Hans van Dijk, Ron van Megen, Guido Vroemen, 2017-05-01 Meyer & Meyer Premium — the next level of instructional sports literature with high-quality, full-color books. How much power does your human engine have? How much power do you need for cycling in different conditions? How can you optimize your training and racing performance? How can you use power meters to improve your results? What are the ultimate limits of human performance? The Secret of Cycling answers all of these questions. All factors determining the performance in cycling are explained step by step: training, nutrition, body weight, bike weight, wheels, frame, aerobars, power meters, wind, hills, temperature, the world hour record and much more. Many graphs, tables and examples from practice make it very easy to understand for the reader. Get 20% fitter, healthier and faster! This title also contains brand new insights on how the balance of the power of your human engine and the power requirement for cycling in different conditions determines your performance. It shows how power meters can be used to optimize your training and your race result. Being already a bestseller in the Netherlands and Belgium, The Secret of Cycling can be considered the ultimate textbook for all serious cyclists and their coaches.

20 minute ftp test calculation: Fuel economy labeling of motor vehicles revisions to improve calculation of fuel economy estimates. , 2006

20 minute ftp test calculation: *Training and Racing with a Power Meter, 2nd Ed.* Hunter Allen, Andrew Coggan, 2012-11-27 Hunter Allen and Andy Coggan, PhD have completely revised the book that made power meters understandable for amateur and professional cyclists and triathletes. Power meters have become essential tools for competitive cyclists and triathletes. No training tool can unlock as much speed and endurance as a power meter--for those who understand how to interpret their data. A power meter displays and records exactly how much energy a cyclist expends, which lends unprecedented insight into that rider's abilities and fitness. With the proper baseline data, a cyclist can use a power meter to determine race strategy, pacing, and tactics. Training and Racing with a Power Meter makes it possible to exploit the incredible usefulness of the power meter by explaining how to profile strengths and weaknesses, measure fitness and fatigue, optimize workouts, time race readiness, and race using power. This new edition: Enables athletes to predict future performance and time peak form Introduces fatigue profiling, a new testing method to pinpoint weaknesses Includes two training plans to raise functional threshold power and time peaks for race day Offers 75 power-based workouts tuned for specific training goals This updated edition also includes new case studies, a full chapter on triathlon training and racing, and improved 2-color charts and tables throughout. Training and Racing with a Power Meter, will continue to be the definitive guide to the most important training tool ever developed for endurance sports.

20 minute ftp test calculation: The Road Cycling Performance Manual Bloomsbury Publishing, 2018-06-14 Aimed at cyclists who take their riding seriously, The Road Cycling Performance Manual disseminates the most up-to-date training approaches - based on the latest sports-science thinking and the work of the elite cycling teams - to help riders reach their peak level and improve their overall performance. Written by leading cycling journalist and former Masters Team Pursuit World Champion Nikalas Cook, this authoritative and insightful book provides cyclists with everything they need to know to train and perform at their highest level. Featuring the latest

research and practical advice, including the importance of getting the fundamentals of bike set-up, equipment selection and nutrition correct, this expert guide will lead to dramatic improvements to training times and ride performance. Complete with exclusive contributions from leading cyclists and team coaches from the world of cycling, *The Road Cycling Performance Manual* will provide riders with the competitive advantage to ensure they move up the race field.

20 minute ftp test calculation: The Triathlon Training Book DK, 2016-02-16 *The Triathlon Training Book* is your one-stop reference for training and competing in a triathlon. Find all the essentials you need to start training and improve your performance: + Clear, customizable training plans for all triathlon distances. + Step-by-step exercises to build your strength. + Incredible illustrations that explain efficiency and speed. + Expert advice on race-day strategy, nutrition, and equipment. + Trustworthy advice on treating common triathlon injuries and maintaining a healthy body. Whether you are a first-timer or a seasoned Ironman veteran, you'll find what you need in *The Triathlon Training Book*. There's even a special performance chapter with detailed anatomical artwork that explains the physiology and body mechanics for swimming, cycling, and running so you can see what's happening inside your body as you train. Author Bio: James Beckinsale (MSc and BTA Level 3) is one of the UK's leading high-performance triathlon coaches. Founder of Optima Racing Team in London and an Olympic and Commonwealth Games Coach, he has been training novice and elite athletes for 17 years. James has coached age-group triathletes to medal at World, European, and Ironman competitions, and his website is www.optimaracingteam.com.

20 minute ftp test calculation: Training and Racing with a Power Meter Hunter Allen, Andrew R. Coggan, Stephen McGregor, 2019-04-17 *Training and Racing with a Power Meter* brings the advanced power-based training techniques of elite cyclists and triathletes to everyone. A power meter can unlock more speed and endurance than any other training tool—but only if you understand the data. This new third edition of *Training and Racing with a Power Meter* updates the comprehensive guide so that any rider can exploit the incredible usefulness of any power meter. Pioneering cycling coach Hunter Allen and exercise physiologists Dr. Andy Coggan and Stephen McGregor show how to use a power meter to find your baseline power data, profile your strengths and weaknesses, measure fitness and fatigue, optimize your daily workouts, peak for races, and set and adjust your racing strategy during a race. This third edition includes: All-new power metrics: FRC, Pmax, mFTP, Power Duration Curve, and more Two new power-based training plans for masters cyclists and triathletes New training plans to raise Functional Threshold Power Over 100 new power-based workouts New guidance for triathletes on pacing the bike and run New case studies on master cyclists and triathletes Methods to test power duration and pinpoint weaknesses in a variety of race distances 100 newly illustrated charts *Training and Racing with a Power Meter*, 3rd Ed. is the definitive, comprehensive guide to using a power meter. Armed with the revolutionary techniques from this guide, cyclists and triathletes can achieve lasting improvements for their best performances ever.

20 minute ftp test calculation: FTP Code International Maritime Organization, 2012 *The 2010 FTP Code* provides the international requirements for laboratory testing, type approval and fire test procedures for products referenced under SOLAS chapter II-2. It comprehensively revises and updates the current Code, adopted by the MSC in 1996. The 2010 FTP Code includes the following: test for non-combustibility; test for smoke and toxicity; test for A, B and F class divisions; test for fire door control systems; test for surface flammability (surface materials and primary deck coverings); test for vertically supported textiles and films; test for upholstered furniture; test for bedding components; test for fire-restricting materials for high-speed craft; and test for fire-resisting divisions of high-speed craft. It also includes annexes on Products which may be installed without testing and/or approval and on Fire protection materials and required approval test methods

20 minute ftp test calculation: The Cyclist's Training Bible Joe Friel, 2018-04-11 *Train to win with Joe Friel* and the definitive guide to optimal cycling performance. Inside this all-new *Cyclist's Training Bible*, Joe Friel—cycling's most experienced personal coach—presents the latest discoveries in cycling science, data analysis, daily planning, and skills development to help you create a personal

training plan for success. Whether you are training for road races, criteriums, time trials, or gravel races, or you just need to improve your climbing, sprinting, endurance, or recovery, The Cyclist's Training Bible covers it all, including: Power Meter Metrics: Put cycling's most advanced science to work during every training session. TSS-Based Training: Use the Training Stress Score to gauge training load and build a superior training plan. Personalized Planning: Create a custom training program to capitalize on your strengths and minimize your limiters. Field Tests: Evaluate progress and improve your training focus by performing Functional Threshold Power, Functional Aerobic Capacity, Sprint Power, Time Trial, and Functional Threshold Heart Rate tests. Timing Your Peak and Taper: Shed training fatigue while maintaining fitness in the lead-up to key races. Planning a Season: Joe Friel's most advanced and comprehensive tools will help you create a winning daily, monthly, and yearly training plan. Strength Training: Develop climbing and sprinting power with targeted exercises on the bike and in the gym. Cycling Workouts: Follow detailed workouts to build aerobic endurance, muscular force, speed skill, muscular endurance, anaerobic endurance, and sprint energy. From the most trusted name in endurance sports coaching, The Cyclist's Training Bible is the most comprehensive and reliable training resource ever written for cyclists.

20 minute ftp test calculation: Cycling Science Stephen S. Cheung, Mikel Zabala, 2017-06-21 Finally, the authoritative resource that serious cyclists have been waiting for has arrived. The perfect blend of science and application, Cycling Science takes you inside the sport, into the training room and research lab, and onto the course. A remarkable achievement, Cycling Science features the following: • Contributions from 43 top cycling scientists and coaches from around the world • The latest thinking on the rider-machine interface, including topics such as bike fit, aerodynamics, biomechanics, and pedaling technique • Information about environmental stressors, including heat, altitude, and air pollution • A look at health issues such as on-bike and off-bike nutrition, common injuries, fatigue, overtraining, and recovery • Help in planning training programs, including using a power meter, managing cycling data, off-the-bike training, cycling specific stretching, and mental training • The latest coaching and racing techniques, including pacing theories, and strategies for road, track, MTB, BMX, and ultra-distance events In this book, editors and cycling scientists Stephen Cheung, PhD, and Mikel Zabala, PhD, have assembled the latest information for serious cyclists.

20 minute ftp test calculation: *Fire Retardancy of Polymeric Materials, Second Edition* Charles A. Wilkie, Alexander B. Morgan, 2009-12-10 When dealing with challenges such as providing fire protection while considering cost, mechanical and thermal performance and simultaneously addressing increasing regulations that deal with composition of matter and life cycle issues, there are no quick, one-size-fits-all answers. Packed with comprehensive coverage, scientific approach, step-by-step directions, and a distillation of technical knowledge, the first edition of Fire Retardancy of Polymeric Materials broke new ground. It supplied a one-stop resource for the development of new fire safe materials. The editors have expanded the second edition to echo the multidisciplinary approach inherent in current flame retardancy technology and put it in a revised, more user-friendly format. More than just an update of previously covered topics, this edition discusses: additional fire retardant chemistry developments in regulations and standards new flame retardant approaches fire safety engineering modeling and fire growth phenomena The book introduces flame retardants polymer-by-polymer, supplemented by a brief overview of mode of action and interaction, and all the other ancillary issues involved in this applied field of materials science. The book delineates what, why, and how to do it, covering the fundamentals of polymer burning/combustion and how to apply these systems and chemistries to specific materials classes. It also provides suggested formulations, discusses why certain materials are preferred for particular uses or applications, and offers a starting point from which to develop fire-safe materials.

20 minute ftp test calculation: Peloton Hacks Mark A. Gompertz, 2020-05-26 With over 1.5 million users, growing exponentially, the revolutionary exercise bike that has quickly changed the health and fitness world, now has its first how-to book that will enhance your workout. The indoor cycling bike that streams live and on-demand classes into your home uses cutting edge technology, providing enormous health benefits and solves the challenge of finding a "work/life balance."

Although it is insanely loaded with features, learning how to use it is not always intuitive or easy. This unofficial guide greatly remedies that by pointing out how to quickly and effectively get the most out of your bike from the moment it enters your home. Whether it is clipping in and out of the pedals, executing correct posture, positions and ergonomics, understanding the leaderboard, setting up power zones, customizing audio, video chatting with friends, trouble shooting heart monitor issues, navigating different levels of classes, measuring health and fitness metrics, or getting the most out of off-bike activities on the Peloton App, this concise volume will save you countless hours of searching on the web, waiting on a call for customer support, or watching YouTube videos. With over fifty photographs, PELOTON HACKS reveals what you need to know and what you will want to know so you can easily and quickly begin reaching your desired fitness objective and, most importantly, have fun with your Peloton bike.

20 minute ftp test calculation: Full Gas Forever Ed Clancy, Lexie Williamson, 2025-08-28 'What Ed Clancy doesn't know about cycling isn't worth knowing' - SIR CHRIS HOY 'Unless you've worked out how to stop time, you're going to need this book' - NED BOULTING 'A timely reminder that age is no reason to slow down' - TOUR DE FRANCE WINNER GERAINT THOMAS 'Brilliant advice, light-hearted and insightful' - OLYMPIC CHAMPION VICTORIAN PENDLETON MBE AN EXPERT GUIDE FOR ROAD CYCLISTS LOOKING TO DEFY THE YEARS AND RIDE FASTER AND FURTHER Getting older does not mean getting slower. Improving your performance is achievable despite the advance of the years. If you are a midlife rider who wants to ride faster and for longer, Full Gas Forever provides the complete guide. Ed Clancy OBE, a three-time Olympic gold-medal winning cyclist and fitness writer, flexibility expert and midlife cyclist Lexie Williamson, are the ideal people to guide you through the strategies, training, benefits and pitfalls of going full-gas in your fifth or sixth decade. Mixing anecdotes, insights and personal experiences from their own sporting lives, you will find practical guidance on the following: · exercises to enable riders to work on this area of fitness. · off-bike preparation · ride fuelling through a nutritionally focused diet · recovery strategies · injury prevention as well as advice on avoiding overtraining. · dealing with injuries and adapting your training plan accordingly · specifically designed programmes to smash the sprints and outlast the others in a test of endurance. Whether you're looking to scale those peaks, smash those sprints or outlast the others in a test of endurance, this book shows just how it can be done.

20 minute ftp test calculation: Triathlon 2.0 Jim S. Vance, 2016-02-08 Serious triathletes may be the most tech-savvy of all athletes. You have the latest devices and know that data to improve your performance are at hand, but putting it all together can be a daunting, confusing task. Triathlete, coach, researcher, and author Jim Vance maintains that, despite access to the relevant information, most triathletes start a race undertrained or overtrained. That's why he's developed Triathlon 2.0: Data-Driven Performance Training, the first program to take advantage of the latest science and technology. Triathlon 2.0 examines the sport's most popular devices, including cycling power meters, GPS trackers, and heart rate monitors. Capture the most accurate readings, learn what they mean, and, just as important, what they don't. Then, put the numbers to work for you, translating your data into a comprehensive program based on your performance needs and triathlon goals. With Triathlon 2.0, you will learn these skills: • Establish and identify optimal aerobic fitness base. • Determine the exact number of intervals for the most effective training and quickest recovery. • Identify performance markers to track training results. • Develop a tapering plan for peak performance. • Monitor pace and progress in real time. If you're serious about maximizing performance, then turn to the only program built around your personal performance data. With Triathlon 2.0, the power and plan are in your hands.

20 minute ftp test calculation: Ultra-Distance Cycling Simon Jobson, Dominic Irvine, 2017-04-06 This expert guide to competitive ultra-distance cycling is all riders need to cycle a very long way, fast. Ultra-distance events are among some of the greatest challenges a cyclist can face, with riders spending hundreds of miles in the saddle over a 24-hour period, battling the elements and overcoming both physical and mental hardships. What was once elite is now commonplace, and today thousands of dedicated riders cycle up to and over 100 miles on ultra-distance rides every

week. To add to this, the increasing profile of major events such as Race Across of America (RAAM), Race Across the Alps (RATA) and Ultracycling Dolomitica means that many more riders are being drawn to the challenge of 'non-stop' endurance cycling. Ultra-Distance Cycling is the first mainstream book to offer practical, authoritative guidance to cyclists looking to step-up to long-distance endurance events, as well as expert advice to established competitors seeking a competitive advantage. Written by a leading sports scientist and a record-breaking ultra-distance cyclist, this unique book is both science and experience based, offering practical and performance-enhancing insights on a wide range of areas. These include physical training and mental preparation, guidance on your support network, advice on PR and sponsorship, as well as all-important sections on equipment, nutrition and the major ultra-distance cycling events. This definitive manual provides riders with everything they need to ride longer and faster, and to excel at ultra-distance cycling events.

20 minute ftp test calculation: Run with Power Jim Vance, 2016-05-01 RUN WITH POWER is the groundbreaking guide you need to tap the true potential of your running power meter. From 5K to ultramarathon, a power meter can make you faster but only if you know how to use it. Just viewing your numbers is not enough; you can only become a faster, stronger, more efficient runner when you know what your key numbers mean for your workouts, races, and your season-long training. In Run with Power, TrainingBible coach Jim Vance offers the comprehensive guide you need to find the speed you want. Run with Power demystifies the data and vocabulary so you can find and understand your most important numbers. You'll set your Running Power Zones so you can begin training using 8 power-based training plans for 5K, 10K, half-marathon, and marathon. Vance shows you how you can compare wattage, heart rate, pace, and perceived exertion to gain the maximum insight into your performances, how you respond to training, and how you can train more effectively. Run with Power will revolutionize how you train and race. Armed with Vance's guidance, you can train more specifically for races, smooth your running technique, accurately measure your fitness, predict a fitness plateau, monitor injuries, know exactly how hard you're training, get more fitness from every workout, recover fully, perfect your tapers, warm up without wasting energy, pace your race on any terrain, know when to open the throttle, and create an unprecedented picture of yourself as an athlete. If you're just glancing at the number on your wrist or computer monitor, you've got a lot more speed potential. Knowledge is power and understanding your power numbers can open the gate to new methods and new PRs. Run with Power introduces the use of power meters to the sport of running and will show you how to break through to all-new levels of performance. Key concepts explored in Run with Power: 3/9 Test, 30-minute Time Trial Test, Running Functional Threshold Power (rFTPw), Running Functional Threshold Pace (rFTPp), Averaged and Normalized Power (NP), Intensity Factor (IF), Peak Power, Variability Index, Efficiency Index (EI), speed per watt, Vance's Power Zones for Running, Training Stress Score (TSS), and Periodization with Power. Includes 6 testing methods and 8 power-based training schedules and workouts for 5K, 10K, half-marathon, and marathon.

20 minute ftp test calculation: Cycling Power Ava Thompson, AI, 2025-03-14 Unlock your cycling potential with Cycling Power, a guide to enhancing endurance, leg strength, and fitness through power-based training. This book translates sports science into practical strategies, empowering you to understand and measure your power output to create effective, personalized cycling workouts. Discover how data-driven insights can help you avoid overtraining and plateaus, leading to significant performance gains. The book begins by introducing power and its significance in cycling, then progresses to power meters and data interpretation. It focuses on developing effective training plans based on power data, including setting goals, determining training zones, and structuring workouts. You'll learn about threshold power, VO2 max intervals, and endurance-focused riding, culminating in race-day strategies optimizing pacing and decision-making.

20 minute ftp test calculation: The Midlife Cyclist Phil Cavell, 2021-06-24 'The Midlife Cyclist is a triumph' - Cycling Plus 'Phil is eminently qualified to write The Midlife Cyclist. Well, he is certainly old enough.' - Fabian Cancellara, Tour de France rider and two-time Olympic champion ---

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