

TACTICAL
CADENCE
— STRENGTH & CONDITIONING —

TACTICAL CADENCE

Why Strength Training Wins Races

Two disciplines. One engine.

A STRENGTH & CONDITIONING COACH'S GUIDE FOR CYCLISTS

TACTICAL CADENCE

WHO WE ARE

TWO DISCIPLINES. ONE ENGINE.

Tactical Cadence Coaching bridges the gap most programs ignore: the road and the rack. We build athletes who are aerodynamic and unbreakable — combining precise cycling performance analysis with structured strength training. No guesswork, no filler blocks. Every session is engineered to move the number that matters. If you want to ride faster and hold that speed when it hurts, you're in the right place.

01

PHASE_00 // CORE_FOUNDATION

THE COACH BEHIND THE PROGRAM

Tactical Cadence Coaching was built on three things: a deep understanding of machines, a lifetime of disciplined service, and the science of human performance. I don't deal in hype or shortcuts — I align your bike, your body, and your mindset to deliver results when it counts.

12

12 YEARS AS A MECHANIC

Before I was coaching watts and thresholds, I was diagnosing creaks, failures, and micro-adjustments most riders never notice. Twelve years on the tools taught me that the bike and the rider are one system — and that tiny details decide outcomes. When I build your plan, I'm thinking about torque, contact points, and efficiency as much as heart rate and power.

18

18 YEARS IN THE ARMY RESERVES

Discipline isn't a slogan — it's how I've lived for nearly two decades in uniform. I understand structured progression, accountability, and what it takes to perform under pressure when failure is not an option. Your training won't be random; it will be clear, direct, and built to make you mentally as sharp as you are physically.

ES

LIONEL UNIVERSITY EXERCISE SCIENCE

I've backed up real-world reps with a formal Exercise Science degree from Lionel University, focused on how humans adapt, recover, and come back stronger. Your program is built on evidence, not guesswork — from load management and fueling to recovery and long-term progression. Every interval has a purpose, and every block moves you closer to your objective.



WHY CYCLISTS SKIP THE WEIGHT ROOM (AND WHY THAT'S A MISTAKE)

Most cyclists live by one rule: more time in the saddle equals more speed. So the gym gets treated as optional — something for the off-season, or for other sports entirely. That instinct is understandable. It's also costing you watts.

The truth is simple: cycling only trains cycling-specific endurance. It does very little to build the raw strength, tendon resilience, and neuromuscular power that separate a rider who fades in the final kilometer from one who attacks it. Pure volume has a ceiling. Strength is often the missing variable that breaks through it.

This isn't about becoming a bodybuilder or trading away your climbing weight. It's about giving your engine — muscles, tendons, and nervous system — the capacity to produce more force, more efficiently, for longer.

WHAT THE RESEARCH ACTUALLY SHOWS

The evidence for strength training in cycling isn't new, and it isn't marginal.

30%

A study published in the European Journal of Applied Physiology found that well-trained cyclists who added heavy resistance training improved their leg strength by an average of 30% over 10 weeks – with measurable gains in power output.

372→399W

Research tracking a strength-training group over a competitive season found their 5-minute mean power rose from 372 to 399 watts, meaningfully outpacing a comparable endurance-only group.

17

A broader meta-analysis covering 17 separate studies concluded that heavy strength training improves cycling efficiency, anaerobic power, and combined cycling performance – with the underlying mechanism tied to better force production per pedal stroke, not just bigger muscles.

The pattern across the literature is consistent: strength training doesn't compete with your cycling training. It multiplies it.

THE THREE PILLARS OF TACTICAL CADENCE

Everything in this program rests on three pillars, each pulled directly from a different part of my background.

01 MECHANICAL PRECISION

Twelve years as a mechanic taught me that the bike and rider are one system. Strength work is prescribed with your position, contact points, and pedaling mechanics in mind — never generic.

02 DISCIPLINED STRUCTURE

Eighteen years in the Army Reserves means your program follows a clear chain of progression. No random workouts, no guessing what to do next. Every phase has a purpose and a deadline.

03 EVIDENCE-BASED PROGRAMMING

A formal Exercise Science degree means every lift, rep range, and recovery window is chosen because the research supports it — not because it's trendy. Load management, fueling, and recovery are treated as seriously as the lifts themselves.

CORE PRINCIPLES

What Effective Strength Training Looks Like for Cyclists. Not all strength training transfers to the bike. Here's what separates programming that actually moves your numbers from time wasted in the gym.

1 TRAIN HEAVY, NOT JUST TIRED

Low-load, high-rep circuits build muscular endurance you're already getting from riding. What cycling doesn't give you is maximal force production. Low reps (3-6) at heavy loads build the neuromuscular strength that raises your ceiling.

2 PRIORITIZE COMPOUND, UNILATERAL MOVEMENTS

Squats, deadlifts, and single-leg work mirror the force patterns of pedaling far better than isolation machines. Unilateral exercises also expose and correct left-right imbalances that years of cycling can quietly create.

3 RESPECT THE INTERFERENCE EFFECT

Stack strength sessions too close to hard rides and you blunt both adaptations. Timing and sequencing within the week matter as much as the lifts themselves.

4 PERIODIZE IT

Strength training isn't a constant. It shifts in emphasis across the season — from building a base of general strength, to converting that strength into power, to maintaining it in-season without draining your legs.

COMMON WEAKNESSES WE SEE IN CYCLISTS

Years in the saddle build incredible aerobic engines – and, almost universally, the same handful of structural gaps. Recognizing these is the first step to fixing them.

1 WEAK POSTERIOR CHAIN

Cycling is quad-dominant. Glutes and hamstrings, the muscles responsible for real power and hip extension, often go underused – leaving force on the table and stressing the lower back.

2 LIMITED HIP MOBILITY

Hours in a fixed, flexed position tighten hip flexors and reduce the range you can produce force through, both on and off the bike.

3 CORE AND TRUNK INSTABILITY

A weak core lets energy leak sideways instead of driving forward into the pedals, and it's a common root cause of lower back pain on long rides.

4 LEFT-RIGHT ASYMMETRIES

Most riders have a dominant leg. Left unaddressed, that imbalance shows up as inefficiency, and over time, as injury.

STRENGTH TRAINING AND INJURY PREVENTION

Faster is only useful if you're healthy enough to use it. Structured strength training is one of the most effective tools for keeping cyclists on the bike and out of physio's office.

Stronger tendons and connective tissue tolerate the repetitive load of thousands of pedal strokes per ride without breaking down.

A trained posterior chain and core reduce the compensations that lead to lower back pain, one of the most common complaints among cyclists logging serious mileage.

Corrected asymmetries reduce the uneven loading patterns that quietly cause overuse injuries in the knees and hips over a season.

Better general strength improves bone density and joint resilience — valuable for a sport that, unlike running, offers little natural loading to keep bones strong.

The goal isn't just performance. It's durability — the ability to keep training and racing, season after season.

THE TACTICAL CADENCE PROGRAM: HOW IT'S STRUCTURED

Below is a sample framework showing how a season of strength training integrates with your cycling calendar. Your actual program is customized, but the structure follows this proven periodization model.

P1

Foundation

GOAL

Build general strength and correct imbalances

FREQUENCY

3x per week

REP RANGE

12-15 reps, 2-3 sets, moderate load

FOCUS

Movement quality, unilateral work, core stability

P2

Maximum Strength

GOAL

Build raw force production

FREQUENCY

2-3x per week

REP RANGE

3-6 reps, 3-4 sets, heavy load

FOCUS

Squats, deadlifts, compound lower-body lifts

P3

Power Conversion

GOAL

Convert strength into explosive power

FREQUENCY

2x per week

REP RANGE

3-5 reps, explosive tempo, 3 sets

FOCUS

Jump variations, loaded step-ups, medicine ball work

P4

In-Season Maintenance

GOAL

Preserve strength without compromising recovery

FREQUENCY

1-2x per week

REP RANGE

4-6 reps, 2 sets, heavy but low volume

FOCUS

Minimal effective dose — maintain, don't build

SAMPLE FOUNDATION PHASE WORKOUT (WEEKS 1-4)

A representative session from the Foundation Phase. Perform 3x per week, non-consecutive days.

- | | | |
|---|-----------------------------|------------------------------|
| 1 | Goblet Squat | 3 sets x 12 reps |
| 2 | Romanian Deadlift | 3 sets x 12 reps |
| 3 | Single-Leg Step-Up | 3 sets x 10 reps per leg |
| 4 | Bird Dog | 3 sets x 10 reps per side |
| 5 | Plank | 3 sets x 30-45 seconds |
| 6 | Standing Hip Flexor Stretch | 2 sets x 30 seconds per side |

COACHING NOTE:

Focus on control and full range of motion over load. This phase builds the foundation everything else is built on — rushing it costs you later.

SAMPLE MAXIMUM STRENGTH PHASE WORKOUT (WEEKS 5-10)

A representative session from the Maximum Strength Phase. Perform 2-3x per week, with at least 48 hours between sessions and hard ride days.

- 1** BACK SQUAT – 4 SETS X 5 REPS
- 2** TRAP BAR DEADLIFT – 4 SETS X 5 REPS
- 3** BULGARIAN SPLIT SQUAT – 3 SETS X 6 REPS PER LEG
- 4** WEIGHTED HIP THRUST – 3 SETS X 6 REPS
- 5** PALLOF PRESS – 3 SETS X 10 REPS PER SIDE

COACHING NOTE:

Rest 2-3 minutes between heavy sets. This is not the phase for fatigue-chasing – the goal is maximal force, which requires full recovery between efforts.



Strength training isn't an accessory to your cycling – it's the multiplier most riders never use. The research is clear, the framework is proven, and the only variable left is execution.

If you're ready to stop guessing and start training with a plan built on mechanical precision, military discipline, and exercise science, Tactical Cadence Coaching is ready to build your program.

**TWO DISCIPLINES. ONE
ENGINE. LET'S BUILD
YOURS.**

TACTICAL CADENCE COACHING

CYCLING & STRENGTH