SBT GRVL 75 – Custom Plan for Kyle (19 weeks)

SBT GRVL 75 | 75 MILES | ~~5,500 FT | ~4–6 HOURS

1 · Training Plan Brief

Welcome to your **SBT GRVL 75** training plan. Colorado mountain gravel at its finest. SBT GRVL delivers a proper mountain gravel experience - challenging climbs, technical descents, and scenery that makes you forget the suffering. The 75-mile course is the sweet spot: long enough to require real fitness, short enough to push hard.

WHAT THE COURSE IS LIKE

The SBT GRVL 75 covers 75 miles with 5,500 feet of cumulative elevation gain through mountain gravel terrain—this is a moderate-high handling challenge. Climate: Variable. Cold mornings, warm afternoons, possible afternoon thunderstorms. Be prepared for anything.. Starting elevation is around 6,700 feet, so altitude adaptation is required. The race is well-supported with aid stations. The adventure factor is moderate.

WHY THIS RACE MATTERS

SBT GRVL 75 is a rapidly growing premier mountain gravel event. The organization is excellent - professional organization with small-town charm. The energy, the field, the community—competitive but welcoming. Steamboat's cycling community creates a festive atmosphere. The field depth is strong regional field with national talent. Entry fees are moderate, but you get what you pay for. Travel and lodging Steamboat is a destination town - book early, lodging fills up.

WHAT IT TAKES TO FINISH

You'll be out there 4-6 hours. Base fitness alone won't cut it—you need specific preparation for sustained output. Bike handling confidence at speed, especially in groups. Equipment reliability—mechanical issues end races.

THIS PLAN PREPARES YOU FOR ALL OF IT

Every workout, long ride, and recovery week is designed around SBT GRVL 75's specific demands. Endurance pacing for race distance. Technical handling for mountain gravel terrain. Mental training for when it all falls apart.

By the time you roll to the start in Steamboat Springs, CO, you'll know you're ready.

What Makes This Plan Different

YOUR SELECTED TRAINING METHODOLOGY: G SPOT / THRESHOLD

- Ideal hours match (7h in 7-10h sweet spot)
- Beginner-friendly methodology
- Flexible enough for variable schedule

INTENSITY DISTRIBUTION

ZONE	PERCENTAGE	PURPOSE
Z1–Z2 (Easy Aerobic)	45%	Aerobic base, fat adaptation, durability
Z3 (Tempo)	30%	Muscular endurance, sustained power
Z4–Z5 (Threshold+)	25%	FTP development, VO2max, race sharpness

KEY WORKOUTS IN THIS PLAN

- G Spot Intervals
- Over Unders
- Tempo Blocks
- VO2max intervals (3-5 min hard efforts)
- Threshold Efforts

PROGRESSION STYLE

increase_density

PERFORMANCE EXPECTATIONS

With 7 hours per week over 19 weeks, you're building race-specific fitness using the G SPOT / Threshold approach. This plan is calibrated to your available time and experience level. Execute consistently, fuel properly, and trust the process.

2. RACE-SPECIFIC PREPARATION

Every session, long ride, and progression targets the key demands of **SBT GRVL 75**:

- **sustained climbing at altitude, technical gravel descents, variable weather, and managing effort across 5500ft of elevation gain**

3. COMPLETE TRAINING SYSTEM

This isn't just a workout calendar. You get:

- **84 structured workout files** compatible with Zwift, TrainerRoad, Wahoo, Garmin
- **35-page training guide** covering fueling, heat training, mental prep, race tactics, equipment
- **Race week protocol** with taper guidelines, travel checklist, final prep
- **Quick reference cards** for zones, pacing, common issues
- **FAQ section** answering common training questions

YOUR TRAINING CALENDAR

Your 19-week plan starts **2026-02-16** and ends race week **2026-06-22**. Race day is **2026-06-28 (Sunday)**.

WEEK	DATES	PHASE
W01	2026-02-16 – 2026-02-22	Base
W02	2026-02-23 – 2026-03-01	Base
W03	2026-03-02 – 2026-03-08	Base
W04	2026-03-09 – 2026-03-15	Base
W05	2026-03-16 – 2026-03-22	Base
W06	2026-03-23 – 2026-03-29	Base
W07	2026-03-30 – 2026-04-05	Base
W08	2026-04-06 – 2026-04-12	Base
W09	2026-04-13 – 2026-04-19	Base
W10	2026-04-20 – 2026-04-26	Build
W11	2026-04-27 – 2026-05-03	Build
W12	2026-05-04 – 2026-05-10	Build
W13	2026-05-11 – 2026-05-17	Build
W14	2026-05-18 – 2026-05-24	Build
W15	2026-05-25 – 2026-05-31	Peak
W16	2026-06-01 – 2026-06-07	Peak
W17	2026-06-08 – 2026-06-14	Peak
W18	2026-06-15 – 2026-06-21	Taper
W19	**2026-06-22 – 2026-06-28**	**Race (RACE WEEK)**

WORKOUT FILE NAMING

Your workout files follow this naming convention: `W{week}_{day}_{name}.zwo`

Example: `W01_Mon_Endurance.zwo` = Week 1, Monday, Endurance ride

Day abbreviations: Mon, Tue, Wed, Thu, Fri, Sat, Sun

2 · Before You Start

Before you start executing workouts, you need the right equipment and setup. This isn't about buying the most expensive gear—it's about having the tools that let you execute the plan accurately and safely.

ESSENTIAL EQUIPMENT

- **Bike fit** - Get a professional bike fit before starting. Poor fit leads to injury, inefficiency, and frustration. This is non-negotiable.
- **Reliable bike** - Your bike doesn't need to be expensive, but it needs to work. Brakes, shifting, and drivetrain should be in good condition.
- **Power meter AND heart rate monitor** - Both are requisite training tools. Power meter for accurate zone training. Heart rate monitor for backup zones and recovery monitoring. **CRITICAL:** Use a chest strap heart rate monitor, NOT an optical wrist-based sensor—optical sensors provide poor data quality for training purposes.
- **Indoor trainer** - You'll do many workouts indoors. A smart trainer (power-controlled) is ideal, but a basic trainer with power meter on bike works.
- **Training computer** - Garmin, Wahoo, or similar to record workouts and sync to TrainingPeaks.

TRAININGPEAKS SETUP

This plan is designed to sync with TrainingPeaks. Set up your account, connect your devices, and ensure workouts sync automatically.

TIME COMMITMENT

This plan requires ~7 hours per week. Be honest about whether you can commit this time. Missing workouts consistently defeats the purpose of structured training.

HEALTH CHECK

If you have any health concerns, consult a doctor before starting. This plan is demanding. Your health comes first.

3 · Training Fundamentals

Before you start executing workouts, you need to understand how training works at a mechanical level.

Not theory for theory's sake---practical understanding that changes how you approach every session, how you structure your week, and how you respond when your body doesn't cooperate.

This chapter builds from first principles: the adaptation cycle that drives all fitness gains, the zones that define intensity, the variables you manipulate to create training stress, the phases that organize your 19 weeks, and the philosophical approaches that match different athlete types.

Start here. Everything else makes more sense after this.

The Foundational Model: How Adaptation Works

All training follows the same basic cycle. Understanding this cycle is the difference between training intelligently and just accumulating fatigue.

STEP 1: STRESS

You apply training stress---a hard workout that exceeds your current capacity.

This creates disruption:

- Muscle fibers develop microtears
- Glycogen stores deplete
- Metabolic waste accumulates
- Cellular damage occurs

Your body registers this as a problem that needs solving.

STEP 2: FATIGUE

Immediately after training, you're weaker than before you started.

Your muscles are damaged. Your fuel tanks are empty. Your nervous system is taxed. If you tested your FTP right after a hard interval session, it would be lower than your rested FTP.

This is normal. Fatigue is the signal that triggers adaptation.

STEP 3: RECOVERY

Given adequate rest, nutrition, and time, your body initiates repair:

- Muscle fibers rebuild
- Mitochondria multiply (more cellular power plants)
- Capillary density increases (better oxygen delivery)
- Glycogen storage expands
- Neurological efficiency improves

This takes time. The timeline depends on the magnitude of stress:

- 24-48 hours: Muscle repair, glycogen replenishment
- 3-7 days: Mitochondrial adaptation, structural changes
- 2-4 weeks: New baseline fitness, measurable performance gains

STEP 4: ADAPTATION (SUPERCOMPENSATION)

If recovery is complete, your body doesn't just return to baseline---it overshoots.

This is called supercompensation: your body builds slightly more capacity than it had before to handle similar stress more easily next time.

You're now stronger than you were before the workout.

STEP 5: APPLY NEW STRESS

Once you've adapted, you apply a slightly larger stress. The cycle repeats.

Over weeks and months, these small adaptations compound into meaningful fitness gains.

WHERE IT GOES WRONG

INSUFFICIENT STRESS

If the workout is too easy, there's no disruption. No problem to solve. No adaptation triggered.

You're just riding around.

INSUFFICIENT RECOVERY

If you apply new stress before recovery is complete, you accumulate fatigue without adaptation.

You're digging a hole, not building fitness.

INCONSISTENT STRESS

If you train sporadically---heroic efforts followed by weeks off---you never compound adaptations.

You're starting over every time.

THE PRACTICAL RULES

1. TRAINING STRESS MUST BE ADEQUATE BUT NOT EXCESSIVE

Hard enough to trigger adaptation. Not so hard you can't recover.

2. RECOVERY MUST BE PRIORITIZED AS MUCH AS TRAINING

Sleep, nutrition, stress management---these aren't optional. They're where adaptation happens.

3. CONSISTENCY COMPOUNDS

Ten weeks of steady training beats four weeks of heroics followed by injury or burnout.

4. FITNESS IS CUMULATIVE

Every completed workout adds to the total. Missed workouts don't just subtract---they prevent compounding.

5. PATIENCE IS REQUIRED

Meaningful adaptation takes weeks and months, not days. Trust the process.

4 · Your 19-Week Arc

Understanding the big picture helps you navigate the individual weeks.

Your 19-week plan isn't random workouts strung together---it's a carefully structured progression designed to build the specific fitness required for **SBT GRVL 75**.

Here's how it breaks down:

PHASE	WEEKS	GOAL	WHAT YOU'RE DOING
Foundation	1–3	Build aerobic base	High volume Z2, establish baseline fitness
Build	4–7	Develop race-specific fitness	G Spot intervals, sustained efforts at 88–92% FTP
Peak	8–10	Maximum fitness	Longest rides, hardest intervals, race simulation
Taper	11–12	Maintain fitness, maximize freshness	Reduced volume, maintain intensity, recover fully

WEEK-BY-WEEK OVERVIEW

The following table provides a high-level view of your 19-week progression. Individual workouts are detailed in your TrainingPeaks calendar.

WEEK	PHASE	FOCUS	KEY WORKOUTS
1–3	Base	Aerobic foundation	Z2 endurance, FTP test, tempo introduction
4–7	Build	G-Spot development	Sustained G-Spot efforts, threshold intervals, long rides
8–10	Peak	Race simulation	Long race-pace rides, VO2max maintenance, dress rehearsal
11–12	Taper	Freshness	Reduced volume, sharpening efforts, race openers

5 · Training Zones

Every workout prescription includes a zone target. Here's what they mean and how to use them.

THE POINT OF ZONES

Zones exist to quantify intensity and give you a common language for prescribing workouts.

But here's the paradox: **the end goal of measuring intensity is to help you develop a feeling for intensity.**

That's right---you don't use power meters, heart rate monitors, and zone charts just to become enslaved to those devices. You use them to develop an intuitive sense of effort.

Why?

Because despite our best efforts, the human body remains too complex to neatly summarize with device-generated data. Your subjective feeling is infinitely more valuable than numbered outputs based on incomplete data collection, reductive models, and population-level assumptions.

You're a special snowflake.

Learn your snowflake.

THE THREE MEASUREMENT SYSTEMS

POWER (% OF FTP)

Most precise system. Measures actual work output in watts. Immediate feedback. Not affected by heat, hydration, caffeine, or fatigue (though your ability to produce power is). This is the gold standard.

HEART RATE (% OF HRMAX)

Secondary system. Lags behind power by 1-3 minutes (time for HR to rise to match effort). Affected by heat, hydration, caffeine, stress, illness, fatigue. Still useful, especially for pacing long efforts where immediate feedback matters less.

RPE (Rate of Perceived Exertion, 1-10 scale)

Subjective. Your body's experience of the effort. Not precise. Always available. Sometimes more important than devices.

The ultimate arbiter: If the numbers say one thing but your body says another, trust your body.

HOW TO SET YOUR ZONES

FTP: Use your 20-minute test result × 0.95, or use a ramp test.

HRmax: Use the highest HR you've hit in the past year (excluding brief spikes), or use the formula: 211 - (0.64 × age)

Example: Age 38 = 211 - 24.3 = 186 bpm

RPE: This is trained through practice. After a few weeks, you'll know what 7/10 feels like without thinking about it.

THE ZONE PHILOSOPHIES

I'm not wedded to any particular zone scheme, but these zones work because they're practical, proven, widely understood, correspond to actual energy systems, precise enough to describe all efforts, and won't confuse you when you read other training resources.

I'm using Andrew Coggan's power zones (which everyone uses), Norway's Olympia Toppen heart rate zones (used by their Olympic endurance athletes), and the standard 1-10 RPE scale.

Here's the complete chart:

THE 7-ZONE SYSTEM

ZONE	NAME	% FTP	% HRMAX	RPE	FEEL / DESCRIPTION
Z1	**Active Recovery**	<55%	55–72%	1–2	Very easy, relaxed pace. Gentle spinning—feels like nothing. Full conversation possible. Doesn't feel like "training." Perfect for recovery spins or social rides.
Z2	**Endurance**	56–75%	72–82%	3–4	All-day pace—sustainable and steady. Can chat freely. Easy enough to go long but purposeful. Can speak in long sentences. **This is where you should spend MOST of your training time.**
Z3	**Tempo**	76–87%	82–87%	5–6	Comfortably hard. Steady pace. Breathing deeper but rhythmic. Talking in short sentences or phrases. Feels sustainable for 1–2 hours. Great for tempo blocks and long sustained efforts.
GSPOT	**Gravel Race Pace**	88–92%	87–92%	6–7	Uncomfortably sustainable. Hard enough to hurt, easy enough to repeat. This is where you'll spend most of a gravel race. Breathing is controlled but deep. Can speak in short phrases but wouldn't want to. The bread and butter of gravel-specific training.
Z4	**Lactate Threshold**	93–105%	94–99%	7–8	Hard, controlled effort. Focused work. Can only say a few words at a time. Breathing is labored. Designed for 10–30 minute blocks. Builds your ability to produce and clear lactate.
Z5	**VO2max**	106–120%	92–100%	9	Very hard, heavy breathing. Near maximum. Only single words possible. Breathing is ragged; speech is nearly impossible. Efforts last 2–8 minutes. Targets max aerobic capacity.

Z6	**Anaerobic Capacity**	121–150%	N/A*	10	Sharp, explosive efforts—30 seconds to 3 minutes max. All-out. Legs burn, hard to breathe or talk. Builds anaerobic power and lactate tolerance.
Z7	**Neuromuscular Power**	>150%	N/A*	10	All-out sprints or jumps. Pure explosive power. You're not breathing hard from your lungs—your nervous system and muscles scream. Lasts only seconds. Maximum speed and skill.

**Heart rate can't respond fast enough to track Z6-Z7 efforts. Use power and RPE.*

CRITICAL NOTES ON USING ZONES

1. ZONES ARE DESCRIPTIVE, NOT PRESCRIPTIVE

Zones describe what you did, not a rigid target you must hit. You're targeting a range, not a precise number.

If the workout says "Z2," anywhere in 56-75% FTP counts. Don't obsess over hitting exactly 65%. Somewhere in the zone is the goal.

2. EASY MEANS EASY

Most people train too hard on easy days. Zone 2 should feel genuinely conversational. If you're breathing hard, you're in Z3.

Fix this. It's the most common training mistake.

Most common mistake in endurance training: riding "moderately hard" all the time. You need polarization---easy days truly easy (Z1-Z2), hard days truly hard (Z4-Z6). Very little time in Z3.

3. RPE IS THE ULTIMATE ARBITER

Power meters can lie: bad calibration, stale FTP, wrong crank length setting. Heart rate can be misleading: heat, dehydration, caffeine, illness, accumulating fatigue.

Your body doesn't lie.

If 90% FTP feels like 9/10 today when it should feel like 7/10, something's wrong. Don't push through. Back off and investigate.

Cross-reference all three metrics. When they align, you're dialed in. When they conflict, trust RPE.

FTP TESTING

Functional Threshold Power (FTP) is the cornerstone of this training plan. It's the highest average power you can sustain for approximately one hour at maximum steady effort.

All your training zones are calculated as percentages of FTP. **Wrong FTP = wrong zones = ineffective training.**

WHEN TO TEST

- **Week 1:** Establish baseline FTP before training begins
- **Week 6-7 (optional):** Check progress if curious, but not required
- **Week 11:** Final test during taper to confirm fitness gains

Don't test more often. FTP doesn't change weekly. Let the training work over multiple weeks before retesting.

HOW TO TEST

Option 1: 20-Minute Test (Recommended)

1. Warm up thoroughly: 15-20 minutes progressive from Z1 to Z3
2. Include 3×1 minute at Z4-Z5 to open the legs
3. 5 minutes easy recovery spin
4. 20 minutes all-out, best average power you can hold
5. Cool down 10-15 minutes easy
6. **FTP = 20-minute average power × 0.95**

Option 2: Ramp Test

Many smart trainers (TrainerRoad, Zwift, Wahoo) offer ramp tests: progressive increase in power every minute until failure. The app calculates FTP from your max power achieved.

Pros: Shorter, less painful
Cons: Slightly less accurate for some athletes

Choose one method and stick with it. Don't mix methods—they yield slightly different numbers.

HEART RATE MAX TESTING

If using heart rate zones (either as primary or backup), you need an accurate HRmax.

OPTION 1: USE YOUR HIGHEST RECORDED HEART RATE

Check your training data from the past year. What's the highest heart rate you've hit during hard efforts? That's likely close to your actual max (excluding brief spikes from sudden efforts or errors).

OPTION 2: FIELD TEST

After a thorough warm-up, do 3-4×3 minutes at maximum effort up a sustained climb with 3 minutes recovery between. Your HR in the final effort should approach max.

OPTION 3: FORMULA (LEAST ACCURATE)

HRmax = 211 - (0.64 × age)

Example: 38 years old = 211 - 24.3 = 186 bpm

Use the formula only if you lack actual data. Real-world max is always more accurate than estimates.

THE BOTTOM LINE ON ZONES

Zones are tools, not masters.

Learn them. Use them. But develop your intuition so you can ride by feel when devices fail, conditions change, or your body sends signals the numbers don't capture.

Power + Heart Rate + RPE = complete picture. When they align, you're executing correctly. When they conflict, trust your body.

6 · Workout Execution

Understanding zones is one thing. Executing workouts correctly is another.

This section covers how to approach different workout types, what "good execution" looks like, and how to handle the inevitable days when your body doesn't cooperate.

WORKOUT TYPES

ENDURANCE RIDES (Z2)

Purpose: Build aerobic base, increase mitochondrial density, improve fat oxidation

Execution: Steady, conversational pace. You should be able to speak in full sentences. If you're breathing hard, you're going too hard. These rides should feel easy when you're doing them, but you should feel tired after 3+ hours.

Common mistake: Riding too hard. Zone 2 is not "moderately hard." It's easy. Make it easy.

TEMPO RIDES (Z3)

Purpose: Build sustainable power, practice race-pace efforts

Execution: Comfortably hard. Breathing is deeper but controlled. Can speak in short phrases. Feels sustainable for 1-2 hours.

Common mistake: Confusing tempo with threshold. Tempo should feel sustainable. Threshold should feel like you're at your limit.

G SPOT INTERVALS (88–92% FTP)

Purpose: Build race-specific fitness. This is where you'll spend most of your race.

Execution: Hard but sustainable. Uncomfortable but repeatable. Breathing is controlled but deep. Can speak in short phrases but wouldn't want to.

Common mistake: Going too hard and turning these into threshold efforts. G Spot is hard enough to be race-relevant, easy enough to repeat multiple times.

THRESHOLD INTERVALS (Z4)

Purpose: Increase lactate threshold, improve ability to sustain high power

Execution: Hard, controlled effort. Focused work. Can only say a few words at a time. Breathing is labored. These should feel like you're at your limit, but you can hold it for 10-30 minutes.

Common mistake: Starting too hard and blowing up. Build into threshold efforts. The last 5 minutes should be the hardest.

VO2MAX INTERVALS (Z5)

Purpose: Increase maximum aerobic capacity

Execution: Very hard, near maximum. Heavy breathing. Only single words possible. Breathing is ragged. Efforts last 2-8 minutes.

Common mistake: Not going hard enough. VO2max intervals should feel like you're going to die. If you can complete all intervals easily, you're not going hard enough.

WHEN YOUR BODY DOESN'T COOPERATE

Some days, you won't hit your power targets. That's normal. Here's how to handle it:

IF YOU'RE 5–10% BELOW TARGET:

Continue the workout. Adjust your expectations. Complete the work at the power you can sustain. This is still productive training.

IF YOU'RE 10–20% BELOW TARGET:

Consider shortening intervals or reducing total work. Complete what you can. Don't force it.

IF YOU'RE 20%+ BELOW TARGET:

Stop the workout. Switch to easy Z2 riding. Your body is telling you something. Listen to it. Forcing a workout when you're that far off will only dig a deeper hole.

THE 80% RULE

If you complete 80% of the prescribed work at the right intensity, that's a successful workout. Don't obsess over hitting every single interval perfectly. Consistency over perfection.

7 · Technical Skills for SBT GRVL 75

Fitness gets you to the race. Skills determine whether you use that fitness efficiently or waste it fighting your bike, crashing, or making mistakes that cost time and energy.

A technically skilled rider with moderate fitness will often outperform a fitness monster who can't corner, can't descend, or can't eat while riding. Technical competence is free speed---it requires no additional fitness, just practice.

The good news: these skills are trainable. The key is deliberate practice---focused repetition with the intention of improvement, not just miles logged while thinking about other things.

Here are the five skills that matter most for **SBT GRVL 75**. Practice them during training so they're automatic on race day.

SKILL 1: LOOSE SURFACE CORNERING

WHY IT MATTERS:

Crashes end races. Beyond the obvious injury risk, even a minor crash costs you time, damages equipment, and rattles your confidence for the rest of the day. You'll ride tentatively for hours after a scare, losing speed on every turn.

Confident cornering also lets you maintain speed through technical sections while others slow to a crawl. Over the course of **75 miles**, those speed advantages compound significantly.

HOW TO PRACTICE:

Find a gravel parking lot or quiet gravel road with some turns. Start at 50% of the speed that feels comfortable---seriously, slower than you think necessary.

Focus on three things: First, look through the turn. Your bike goes where your eyes go, so look at your exit point, not at the ground in front of your wheel. Second, weight your outside pedal. Push down hard through the outside pedal---this presses the tires into the surface for better grip. Third, point your inside knee toward the turn. This shifts your weight properly and helps the bike lean.

Gradually increase speed over weeks of practice. Do this progression multiple times, not once. Practice in different conditions---dry packed gravel handles differently than loose limestone, which handles differently than wet clay-based gravel. The goal is to build a library of experience so nothing on race day surprises you.

By race day, you should be able to corner at speed without conscious thought. The skill should be automatic.

The cue to remember: "Eyes through, weight down, knee out"

SKILL 2: EATING WHILE RIDING

WHY IT MATTERS:

In a race lasting 8+ hours, you'll consume thousands of calories. If you can't eat while riding, you have two options: stop frequently (losing time and rhythm) or under-fuel (bonking spectacularly around mile 120).

Race-day nutrition needs to be automatic---something you do without thinking, without slowing down, without fumbling. The time to learn this is not during the race.

HOW TO PRACTICE:

On every training ride over 90 minutes, eat something while riding. Not during stops---while actually pedaling.

Start on flat, straight sections where the consequences of a mistake are minimal. Unwrap bars before you leave, or use products with easy-open packaging. Move food to easily accessible pockets. Fumbling in a jersey pocket while riding is a learned skill.

Practice eating with both hands. You never know which side a hazard might appear on, and you need to be able to grab food, open it, and eat it with either hand staying on the bars.

Graduate to eating on rougher terrain as you get more confident. By race week, you should be able to grab a bar from your pocket, open it, and eat it on bumpy gravel without thinking about it.

The cue to remember: "Flat road first, then rough. Both hands work"

SKILL 3: GROUP RIDING & PACE LINE DYNAMICS

WHY IT MATTERS:

Drafting---riding in another rider's slipstream---saves roughly 25-30% of the energy required to maintain the same speed. Over a 75-mile race, that's an enormous advantage. The difference between finishing strong and barely finishing.

Knowing how to find, join, and contribute to a pace group is often the difference between a good race and a great one. But you need to be the kind of rider others want in their group.

HOW TO PRACTICE:

Join group rides. Any group rides. The faster and more organized, the better, but any group riding teaches useful skills.

Focus on smooth, predictable movements. No sudden braking. No surging. No erratic line choices. When you take a pull at the front, maintain steady effort---don't accelerate. When you rotate off, do it smoothly and predictably, not with a sudden swerve.

Communicate about road hazards. Point at potholes. Call out cars. Wave people through when it's safe. A group that communicates well moves faster and safer than one that doesn't.

Practice maintaining a gap behind another rider---2-3 bike lengths is safe for learning. Work on holding that gap as they accelerate and decelerate. The goal is to become a rider others trust---someone who's predictable, communicates well, and does their share of the work without showing off.

If group rides aren't available or don't fit your schedule, practice following 2-3 bike lengths behind a friend at varying speeds. The skill of maintaining position transfers.

The cue to remember: "Smooth pulls, steady pace, speak up"

SKILL 4: DESCENDING ON LOOSE GRAVEL

WHY IT MATTERS:

Fear on descents means crawling. Crawling means getting dropped. Confidence on descents is free speed---it requires no extra fitness, just skill and experience with the bike moving underneath you.

The psychological aspect matters too. If you're terrified on descents, you'll dread them for miles beforehand. That's mental energy wasted. Confidence on descents frees mental space for other race decisions.

HOW TO PRACTICE:

Find a gravel descent you can repeat safely---ideally one that takes 2-3 minutes. You need somewhere you can do multiple runs without wasting time climbing back to the top.

On your first passes, go slow and focus on body position: weight shifted back (get your butt behind the saddle on steep sections), elbows bent and loose, grip relaxed. Death-gripping the bars prevents the bike from moving naturally beneath you, which actually reduces control.

Each pass, increase speed slightly. Pay attention to where you tense up---that's information about where your skills need work. Notice what happens when you brake: front brake straightens the bike and provides most of your stopping power, rear brake can skid on loose surface but won't wash out the front.

Practice braking before turns, not during them. Braking in a turn on loose gravel is a recipe for washing out the front wheel. Brake, then turn. Not both simultaneously.

Repeat this progression regularly---not once and done. Your confidence on descents is perishable. Practice maintains it.

The cue to remember: "Weight back, light hands, eyes up"

SKILL 5: EMERGENCY REPAIRS

WHY IT MATTERS:

Mechanical issues will happen. Knowing how to fix them keeps you racing. A flat tire at mile 150 doesn't have to end your day---if you can fix it quickly. A dropped chain doesn't have to cost you 10 minutes---if you've practiced the fix. The difference between finishing and DNF often comes down to mechanical competence. You can't control when mechanicals happen, but you can control how prepared you are to handle them.

HOW TO PRACTICE:

Practice changing tubes under time pressure: set a timer, change a tube, aim to beat your previous time. Practice fixing dropped chains: intentionally drop your chain, then fix it quickly. Learn to use tire plugs: practice inserting plugs into a punctured tire. Know your quick-link: practice breaking and rejoining your chain. Test your multi-tool: make sure every tool works before race day. Practice in conditions similar to race day: cold hands, tired, stressed. Build a troubleshooting decision tree: flat = tube or plug? Chain break = quick-link. Derailleur hanger bent = straighten or replace? Spoke break = true wheel or ride carefully? The goal isn't perfection---it's competence under pressure.

The cue to remember: "Carry tools. Know your bike. Practice fixes. Mechanicals are when, not if."

RACE-SPECIFIC SKILL NOTES

Practice descending on loose gravel. The course has technical sections where confidence matters. Train on similar terrain if available.

The bottom line on skills: You can't cram for these the week before the race. Technical skills require repetition over time. Build them into your training rides starting in Week 1, not Week 11.

By race day, these skills should be automatic. You shouldn't be thinking about how to corner or how to eat---you should just be doing it.

8 · Fueling & Hydration

You can have perfect training, a dialed bike, and excellent pacing strategy. None of it matters if you run out of fuel halfway through your race.

Nutrition determines roughly 8% of your race result. That's the difference between finishing strong and crawling to the line.

This chapter covers what to eat, when to eat it, and how to execute nutrition under race stress when your stomach is rebelling and your brain is too stupid to remember to eat.

QUICK REFERENCE: FUELING & HYDRATION GUIDELINES

SCENARIO	CARBOHYDRATE INTAKE	FLUID INTAKE	NOTES
Training Ride < 2 hours	30–45g/hour	500–750ml/hour	Water + electrolytes. Start fueling after 60 min if needed.
Training Ride 2–4 hours	45–60g/hour	500–750ml/hour	Mix of gels, bars, and real food. Practice your race nutrition.
Long Training Ride 4–6 hours	60–75g/hour	500–750ml/hour	Aggressive gut training. Test race-day nutrition strategy.
Race Day (75 miles, ~4–6 hours)	60–90g/hour	500–750ml/hour	Start fueling in first 30 min. Mix multiple carb sources (glucose + fructose).
Hot Conditions (>80°F)	60–90g/hour	750–1000ml/hour	Increase sodium to 500–700mg/hour. Pre-cool if possible.
Cold Conditions (<50°F)	60–90g/hour	400–600ml/hour	Lower fluid needs, but still fuel aggressively. Warm fluids help.

YOUR PERSONALIZED FUELING TARGETS

Based on your questionnaire, body weight, race distance, and goal type, here are your specific fueling numbers:

Hourly Carb Target: 80g/hr

Total Carbs for Race: 416g

Estimated Race Duration: 5.2 hours

Hourly Fluid Target: 500ml/hr

Hourly Sodium Target: 500mg/hr

GUT TRAINING PROGRESSION

Your gut needs training just like your legs. Build to race-day fueling rates progressively:

PHASE	WEEKS	TARGET	FOCUS
Base	1–6	40–50g/hr	Build tolerance – start conservative
Build	7–14	50–70g/hr	Increase absorption capacity
Peak	15–18	60–80g/hr	Race-rate practice
Race	Race day	70–90g/hr	Execute your fueling plan

PRE-RACE NUTRITION

Pre-Race Meal: 3-4 hours before start

Composition: High carb, moderate protein, low fat/fiber

Example: Oatmeal with banana, honey, and nut butter (avoid large amounts of fiber)

Final Top-off: 30-50g carbs 30min before start (gel or sports drink)

PRODUCT RECOMMENDATIONS

Based on your 80g/hr target:

- Gels: ~3.2 per hour (or equivalent liquid carbs)
- Bars: ~3 for variety during race
- Drink mix: 24g carbs per bottle

Practice this exact fueling strategy during long training rides.

THE NUTRITION REALITY CHECK

The cycling nutrition industry wants you to believe you need seventeen different products, each with proprietary blend ratios and specific timing windows measured in seconds.

You don't.

You need carbohydrates during exercise. You need protein and carbs after exercise. You need reasonable daily nutrition that supports training.

That's 95% of it.

Everything else is optimization you can worry about after you've nailed the basics.

DAILY NUTRITION FOR TRAINING

Your body is either recovering from the last workout or preparing for the next one. Daily nutrition supports both.

THE FOUNDATION

Protein: 1.6-2.2g per kg bodyweight

If you weigh 70kg (154 lbs), that's 112-154g protein per day.

Why it matters: Protein rebuilds muscle tissue damaged during training. Skimp on protein and you're just breaking yourself down without rebuilding.

Sources: Meat, fish, eggs, dairy, legumes, protein powder if you're lazy or vegan.

The rule: Spread it across the day. Four meals with 25-40g each beats one massive 150g post-workout shake.

Carbohydrates: 3-7g per kg bodyweight (depends on training volume)

- Easy training days (Z2 endurance): 3-4g/kg
- Hard training days (intervals, long rides): 5-7g/kg
- Rest days: 2-3g/kg

If you weigh 70kg:
- Easy day: 210-280g carbs
- Hard day: 350-490g carbs
- Rest day: 140-210g carbs

Why it matters: Carbs fuel high-intensity work and restock glycogen. Train hard without adequate carbs and your intervals will suck.

Sources: Rice, potatoes, oats, bread, pasta, fruit. Real food first, gels and bars during rides only.

The rule: Match carb intake to training load. Don't carb-load on rest days. Don't under-fuel hard training blocks.

Fat: 0.8-1.2g per kg bodyweight

If you weigh 70kg, that's 56-84g fat per day.

Why it matters: Hormones, cell membranes, vitamin absorption, satiety. Fat doesn't fuel hard efforts but it's essential for recovery and health.

Sources: Olive oil, nuts, avocados, fatty fish, whole eggs, butter.

The rule: Don't fear fat. Don't gorge on fat. Keep it moderate and consistent.

TIMING THAT ACTUALLY MATTERS

Pre-workout (2-3 hours before)

If training hard (threshold, VO2max):
- 1-2g carbs per kg bodyweight
- Low fiber, low fat, moderate protein
- Example: Oatmeal with banana and honey, or toast with peanut butter

If training easy (Z2 endurance):
- Eat normally, don't stress timing
- Can even train fasted if under 90 minutes

The rule: Hard sessions need fuel. Easy sessions are flexible.

During workout

Covered in detail below. Short version: 60-80g carbs per hour for rides over 90 minutes at moderate-to-high intensity.

Post-workout (0-90 minutes after)

If workout was long (2.5+ hours) AND hard, AND you have another hard session within 24-36 hours:
- 20-30g protein
- 1-1.5g carbs per kg bodyweight
- Liquid is fine (protein shake, chocolate milk)

If workout was easy, short, or your next hard session is 48+ hours away:
- Just eat your next meal normally
- Recovery nutrition is optional

The rule: The more frequently you train hard, the more critical recovery nutrition becomes. If you're training once per day with easy sessions, skip the fancy recovery protocols and just eat dinner.

WHAT ABOUT SUPPLEMENTS?

Most supplements are placebo at best, actively harmful at worst.

WORTH TAKING:

Vitamin D (if deficient, most people are): 2000-4000 IU daily
- Supports bone health, immune function, recovery
- Get your levels tested, supplement accordingly

Creatine monohydrate: 5g daily
- Improves high-intensity repeatability
- Useful for VO2max and sprint work
- Cheap, well-researched, safe

Caffeine: 3-6mg per kg bodyweight before hard sessions
- Proven performance enhancer
- Coffee works, pills work, gels work
- Tolerance builds, cycle off occasionally

MAYBE WORTH TAKING:

Beta-alanine: 3-5g daily
- Buffers lactate, helps with threshold work
- Takes 4+ weeks to build up
- Makes your face tingle (harmless but weird)

Beetroot juice/nitrates: 2-3 hours before hard efforts
- Improves oxygen efficiency
- Modest gains (2-3%)
- Tastes like dirt

NOT WORTH TAKING:

BCAAs (branch chain amino acids): Complete waste if you eat adequate protein
Testosterone boosters: Scams
Fat burners: Scams with side effects
Recovery drinks with proprietary blends: Overpriced protein+carbs

The rule: If you're deficient in something (Vitamin D, iron), fix it. If you're considering a supplement to "optimize," ask yourself if you've already nailed sleep, nutrition basics, and training consistency. If not, fix those first.

FUELING DURING WORKOUTS

This is where races are won or lost.

THE 60–80G CARBS PER HOUR RULE

For any ride over 90 minutes at moderate-to-high intensity (Z3+), you need **60-80g of carbohydrates per hour.**

Not 30g. Not 100g. 60-80g.

Why this number?

Your gut can absorb approximately 60g of glucose per hour through SGLT1 transporters. Add fructose (which uses different transporters) and you can push to 90g total. The sweet spot for most athletes is 70-75g per hour—enough to fuel hard efforts without GI distress.

What 70g of carbs looks like:

- **Option 1:** 3 gels (24g each) = 72g
- **Option 2:** 2 bottles of sports drink (35g each) = 70g
- **Option 3:** 2 bars (40g each) = 80g
- **Option 4:** Mix of real food + gels + drink

The rule: Pick what your stomach tolerates. Train your gut to handle race-day fueling. Don't experiment on race day.

WORKOUT-SPECIFIC FUELING

Z2 Endurance Rides (2-4 hours)

- **Intensity:** Low enough to burn primarily fat
- **Fueling:** 40-60g carbs per hour

You can get away with less because you're not depleting glycogen rapidly. Real food works great here—PB&J sandwiches, bananas, bars.

Practice eating solid food on long easy rides. This builds GI tolerance for race day.

Tempo/G Spot Rides (2-3 hours with sustained efforts)

- **Intensity:** Moderate-high, significant glycogen use
- **Fueling:** 60-80g carbs per hour

Start fueling at 30-45 minutes, not 90 minutes. By the time you feel hungry, you're already behind.

Mix of liquids (faster absorption) and solids (more satisfying, prevents flavor fatigue).

Threshold/VO2max Sessions (60-90 minutes)

- **Intensity:** Very high but short duration
- **Fueling:** Pre-workout meal sufficient, maybe one gel mid-session

You're not depleting glycogen in 60 minutes. Don't overthink this. Hydrate normally, maybe take a gel at 45 minutes if going long.

Race Simulation Rides (4-6 hours with race-pace efforts)

- **Intensity:** Variable, high average
- **Fueling:** 70-80g carbs per hour, practice race-day nutrition

This is where you dial in your race fueling. Test different products, timing, combinations. Figure out what your stomach tolerates at race pace.

The rule: The longer and harder the ride, the more critical fueling becomes. Easy rides are forgiving. Race-pace efforts are not.

HYDRATION PROTOCOLS

You lose 0.5-2 liters of fluid per hour depending on temperature, humidity, and effort.

Dehydration of 2-3% bodyweight impairs performance. For a 70kg rider, that's 1.4-2.1 liters—easily achievable in 2-3 hours of hard riding in heat.

HOW MUCH TO DRINK:

Aim for: 500-750ml per hour (16-25 oz)

More in heat, less in cold. More when sweating heavily, less when not.

The rule: Drink to thirst, but don't ignore thirst. By the time you're thirsty, you're already mildly dehydrated.

WHAT TO DRINK:

- **Short rides (<90 min):** Water is fine
- **Long rides (2+ hours):** Electrolyte drink with sodium

Sodium matters on long rides. You lose 500-1000mg sodium per hour through sweat. Sports drinks provide 200-400mg per bottle. Add salt tabs if racing in heat or you're a heavy/salty sweater.

Don't overthink potassium, magnesium, or trace minerals. Sodium is 90% of what matters for performance.

HOW TO VERIFY YOUR HYDRATION STRATEGY WORKS:

Weigh yourself before and after long training rides. Every pound lost represents roughly 16 ounces of fluid deficit. If you're losing more than 2-3% of body weight during rides, you need to drink more.

Example: 150-lb athlete loses 5 lbs during a 4-hour ride. That's 3.3% body weight loss and 80 oz of fluid deficit. At 4 hours, that's only 20 oz/hour consumption—too low. Target should be 32+ oz/hour to stay within 2-3% loss.

Do this calculation during training. Adjust your hydration strategy based on real data from your body. Don't guess.

HOW TO KNOW IF YOU'RE A SALTY SWEATER:

After long training rides, do you see visible salt crystals on your kit or face? Do you crave salty foods immediately after rides? That's information. You need more sodium than average.

CRAMPING

Cramps are **not** caused by electrolyte deficiency (despite what the supplement industry tells you).

Cramps are caused by **neuromuscular fatigue**—your muscles are tired and misfiring.

Salt tabs might help by changing neuromuscular excitability, but they're not addressing the root cause. The real fix is better pacing and better training.

TRAINING YOUR GUT

Your gut is trainable just like your muscles.

If you never eat during training rides, your gut won't tolerate eating during races. You'll get nauseous, crampy, or shut down completely.

The ability to absorb large amounts of carbohydrates while exercising improves with practice. If you've never consumed 80+ grams of carbs per hour during a ride, your first attempt will probably end in GI distress—bloating, cramping, or worse.

Your gut needs practice absorbing carbs while blood flow is diverted to working muscles. This is a learned adaptation.

HOW TO BUILD GI TOLERANCE:

Weeks 1-4 (Base Phase):
- Practice eating real food on easy rides
- 40-50g carbs per hour, mostly solid
- Build tolerance gradually

Weeks 5-8 (Build Phase):
- Increase to 60-70g carbs per hour
- Mix of liquids and solids
- Practice eating at tempo pace

Weeks 9-10 (Peak Training):
- Hit 70-80g carbs per hour
- Race nutrition only (gels, drink, bars you'll use on race day)
- Practice at race pace

Race Week:
- Stick with what worked in training
- No new products
- Trust your gut (literally)

The rule: Your gut adapts to what you consistently ask it to do. If you train it to handle 70g carbs per hour, it will. If you never practice, race day will be miserable.

ONE TRICK THAT HELPS: MIX GLUCOSE AND FRUCTOSE SOURCES

Research shows that combining glucose and fructose (ideally in a 2:1 ratio) allows your gut to absorb more total carbohydrates per hour than either source alone. Different transporters in the intestine handle each sugar, so using both increases total capacity.

Many sports nutrition products are already formulated this way. Check the labels. If you're making your own drink mix, consider combining sources—like maltodextrin (glucose) with table sugar (glucose + fructose).

RACE-DAY NUTRITION STRATEGY

Everything you practiced in training gets executed under stress.

PRE-RACE MEAL (3-4 HOURS BEFORE START)

Goal: Top off glycogen, don't experiment

What to eat:
- 2-3g carbs per kg bodyweight
- Moderate protein
- Low fat, low fiber
- Familiar foods only

Example for 70kg rider:
- 2 cups oatmeal with banana and honey (140g carbs)
- OR 3 pieces toast with jam and peanut butter (120g carbs)
- OR large bowl of rice with eggs (130g carbs)

Drink 500ml water with your meal.

What not to do:
- Try the complimentary breakfast burrito with hot sauce
- Drink coffee if you don't normally drink coffee
- Eat significantly more or less than you practiced

STARTING LINE (30-60 MINUTES BEFORE START)

Take one gel (24g carbs) with 200ml water.

This tops off your tank right before the effort begins. You're not adding meaningful glycogen at this point—you're just making sure blood glucose is stable as the race starts.

DURING THE RACE: THE FUELING TIMELINE

The most common mistake: waiting until you're hungry to start eating.

By the time you feel hungry, your glycogen is already depleted and your brain is glucose-starved. You're in a hole you can't climb out of.

The execution framework:

0-30 minutes:
- Focus on pacing, positioning, settling in
- Sip on drink, don't force nutrition yet
- Heart rate is spiking, gut blood flow is reduced

30-60 minutes:
- First gel or equivalent (24g carbs)
- Start your fueling clock
- Hydrate consistently

Every 45-60 minutes after:
- Consume 60-80g carbs per hour in consistent intervals
- **Example:** Gel every 45 minutes (24g × 4 = 96g per 3 hours, averaging 32g per hour—too low, need drink or bars too)
- **Better example:** Gel every 30 minutes (24g × 2 = 48g per hour) + drink with 30g per hour = 78g total

Set a timer. Seriously. Your brain will be stupid. It will forget to eat. It will lie to you and say "I'm fine, I'll eat at the next aid station." The timer removes decision-making.

At aid stations:
- Top off bottles
- Grab food if needed
- Keep moving

Don't stop for 5 minutes eating a ham sandwich. Grab and go. You're not on a picnic.

WHEN YOUR STOMACH REBELS

It will. At some point in a long race, your gut will protest.

Why it happens:

High-intensity exercise diverts blood from your GI system to working muscles. Your gut slows down. Food sits there, undigested, making you feel like shit.

What to do:

1. Back off intensity for 5-10 minutes
- Drop to Z2 pace
- Let gut blood flow recover
- Allow stomach to catch up

2. Switch to liquid calories temporarily
- Easier to digest than solids
- Sports drink or cola at aid stations
- Gels if you can tolerate them

3. Small sips, not big gulps
- Easier on the stomach
- Less sloshing

4. Don't panic and stop eating entirely
- You'll bonk 30 minutes later
- Maintain some carb intake even if reduced

What not to do:

Hammer harder while nauseous. You'll either vomit or shut down completely.

The rule: Gut distress is your body telling you to back off intensity. Listen for 10 minutes, then resume pace once stomach settles.

THE REALITY CHECK ON FUELING

Most athletes under-fuel during long events. Not because they don't know better—because it's hard.

At mile 100, eating another gel might make you gag. Your stomach might feel full. You might not feel hungry. None of that changes the math: you're burning calories faster than you're consuming them, and eventually the tank will hit empty.

The solution: Treat fueling as a non-negotiable task, not an optional one based on hunger.

Set a timer on your bike computer. Every 20 minutes: consume calories. Every 15 minutes: drink. Make it automatic. Don't wait until you feel hungry or thirsty—by then, you're already behind.

This is why practice matters. By race day, eating and drinking on schedule should feel like shifting gears—just something you do without thinking about it.

WEIGHT MANAGEMENT VS PERFORMANCE

You want to be lean for racing. Lighter climbs easier. Lower body fat improves power-to-weight ratio.

But chasing leanness during a training block is self-sabotage.

THE TRAINING BLOCK RULE

During your 19-week build, your job is to train hard and recover well. Not cut weight.

Why?

Energy deficit impairs recovery. Under-fueled training produces inferior workouts. You're trying to build fitness, not starve yourself into a smaller body.

The hierarchy:
1. Train consistently and well
2. Recover fully
3. Maintain current weight or gain slightly

If you finish your 19 weeks 2kg heavier but significantly fitter, you did it right.

WHEN TO CUT WEIGHT

After your race. During the off-season. When training volume is low and intensity is moderate.

A 500-calorie daily deficit over 8-12 weeks can drop 4-6kg without destroying your fitness. Do this between racing seasons, not during them.

The rule: You can be lean or you can be fast. Pick one per season. Most of the time, pick fast.

BODY COMPOSITION REALITY CHECK

Optimal racing weight is highly individual. Some athletes race well at 8% body fat. Others race well at 14%.

There is no universal "race weight."

What matters: power-to-weight ratio. If your FTP is 300W at 75kg (4.0 W/kg) and you cut to 70kg but your FTP drops to 280W (also 4.0 W/kg), you gained nothing and probably lost durability.

The rule: Chase performance metrics, not scale numbers. If your FTP and climbing times improve, your weight is fine. If they're declining, eat more.

THE BOTTOM LINE

Nutrition determines 8% of your race result. That's significant but not worth obsessing over.

Daily nutrition: Match carbs to training load. Get adequate protein. Don't fear fat. Eat real food.

Supplements: Vitamin D if deficient, creatine for high-intensity work, caffeine before hard sessions. Everything else is optional or snake oil.

During training: Practice eating 60-80g carbs per hour on long rides. Train your gut like you train your legs.

Race day: Eat a familiar pre-race meal 3-4 hours before. Start fueling at 30-45 minutes into the race. Hit 70g carbs per hour consistently. Set a timer so your stupid race brain doesn't forget.

When your stomach rebels: Back off intensity for 10 minutes and switch to liquids. Don't stop eating entirely.

Weight management: Happens in the off-season, not during training blocks. Chase performance, not scale numbers.

Get the basics right. Execute consistently. That's 95% of nutrition.

9 · Mental Training

Mental training isn't optional for endurance racing. It's the difference between finishing strong and imploding at mile 150.

MENTAL TRAINING FRAMEWORK

1. FOUNDATION: BREATHING & PRESENCE

6-2-7 Technique: Inhale 6 counts, hold 2, exhale 7. Calms nervous system, brings focus to present moment.

When to use:

Mid-race panic: When things feel out of control—you're dropped from your group, you just flatted, the pain is overwhelming. 6-2-7 breathing resets your state so you can think clearly.

After a bad section: After a crash, a mechanical, or a period of suffering where you lost time or position. 6-2-7 breathing helps you process it and move on instead of dwelling.

HOW TO PRACTICE

Start with 5 minutes daily, sitting quietly. Just breathe. Count the rhythm. Feel the calming effect. Then practice during easy rides—prove to yourself you can do the breathing pattern while pedaling.

Eventually, practice during hard efforts. You should be able to do 6-2-7 breathing even when working at threshold. It's harder, but possible, and that's when you need it most.

By race day, the technique should be automatic. You shouldn't have to think about the mechanics—just trigger it when needed.

2. REFRAMING: CHANGE YOUR STORY

Instead of: "This hurts" → Say: "This is my body adapting. I'm getting stronger."

Instead of: "I can't do this" → Say: "I'm doing it right now. One pedal stroke at a time."

3. ANCHORING: PHYSICAL CUES

Power position: Hands in drops, core engaged, smooth pedal stroke. This is your "race mode" trigger.

Breathing rhythm: Match cadence to breath (e.g., 2 pedal strokes per breath). Creates flow state.

4. ACCEPTANCE: THE SUFFERING CONTRACT

You signed up for this. Discomfort is part of the deal. Accept it. Don't fight it. Work with it.

Pain is temporary. Quitting lasts forever.

5. PURPOSE: REMEMBER YOUR WHY

Why are you here? Connect to your deeper motivation. This race matters because you chose it.

PERFORMANCE STATEMENTS

Your internal monologue affects your performance. When you catch yourself thinking "I can't do this" or "This is too hard," those thoughts become self-fulfilling prophecies. Your brain interprets them as permission to quit.

Replace negative statements with performance statements:

- "I'm strong enough for this"
- "I've trained for exactly this moment"
- "One section at a time"
- "My body knows what to do"

Practice these during training. Make them automatic. When the race gets hard, your brain will default to whatever pattern you've reinforced.

10 · Race Tactics

Every long gravel race follows a predictable three-act structure. Understanding this structure lets you make smart decisions when others are making emotional ones.

The specifics vary by race—some races front-load the climbing, some back-load it, some are flat. But the psychological and physiological patterns are consistent across all long events.

Here's how it plays out, and what your job is in each phase.

THE THREE-ACT STRUCTURE

PHASE	WHEN	WHAT'S HAPPENING	YOUR JOB
Act 1: The Start	0–2 hours	High energy, adrenaline. Everyone goes too hard. Groups form. Positioning matters.	Stay calm. Don't chase. Fuel early (first 30 min). Find your rhythm. Let the race come to you.
Act 2: The Grind	2–10 hours	The real race. Fatigue sets in. Groups break up. Mental game begins. This is where races are won or lost.	Stay consistent. Fuel every 20–30 min. Manage effort (don't redline). Use mental techniques. One section at a time.
Act 3: The Finish	10 hours – finish	Everything hurts. Decision fatigue. Final push. This is where training pays off.	Empty the tank. Use everything you've got. Remember your why. Push through the pain. Finish strong.

PHASE 1: THE MADNESS (MILES 0–25)

The first 60-90 minutes of any gravel race is chaos. Fresh legs meet nervous energy meet a crowded course. People who trained alone all winter suddenly realize they're uncomfortable in groups. People who didn't do the work try to hang with people who did.

Attacks fly. Groups form, then shatter, then reform. The pace is erratic. Someone surges on every climb. The whole field is making decisions based on adrenaline and ego rather than strategy and fitness.

Your job in this phase is simple: survive.

Don't try to win the race in the first hour. You can't. But you can definitely lose it. Chasing attacks you can't sustain. Riding too hard to stay with a group that's going to explode in another 20 minutes. Forgetting to eat and drink because you're focused on positioning.

Find a group moving at a pace that feels sustainable to you—not exciting, not easy, sustainable. Settle in. Eat. Drink. Let others burn matches.

The riders making huge efforts to get to the front in the first 30 minutes? Most of them will fade. Let them go. You'll see them again later, and they'll be hurting.

PHASE 2: FALSE DAWN (MILES 25–75)

After the initial chaos settles, order returns. Groups stabilize. Pace becomes more predictable. The race can start to feel manageable, even easy.

Don't be fooled. This is the setup for phase three.

This is the phase where good execution means staying disciplined about nutrition and hydration. Your body doesn't hurt yet. You feel fine. It's tempting to skip a gel or wait longer between drinks. Don't.

This is also the phase where you contribute to your group's pace line, but you don't take hero pulls. Pull through, do your share, but don't try to impress anyone. Save that energy.

Watch for riders who are overworking—taking pulls that are too long, going to the front too often, breathing harder than they should be. They're making withdrawals they'll pay for in phase three.

You want to exit this phase feeling good but not great. Fresh but not antsy. If you're bored, that's perfect. Boredom in phase two means you're executing correctly.

PHASE 3: THE PIPER (100 MILES +)

This is when the bill comes due. This is the race.

Under-fueled riders bonk. Their pace craters. They go from holding 18mph to struggling to hold 12mph. You'll pass them. Don't feel bad—they made that choice in phase two when they skipped nutrition.

Under-prepared riders cramp. Their legs seize up. They're forced to slow down or stop. This is what happens when you show up without doing the training.

Mentally weak riders quit. Not literally abandon—though some do. But mentally they check out. They're just surviving, not racing anymore.

If you've done the work—the training, the nutrition practice, the mental preparation—this is where you move up. You're not attacking. You're not surging. You're just maintaining your pace while others lose theirs.

Watch for riders who are struggling:

- Pace dropping noticeably
- Dropped off groups and riding alone
- Weaving slightly (sign of bonking)
- Labored breathing out of proportion to pace

Move past them steadily. Don't attack past them—just maintain your pace and roll by. Save your energy for the riders who are still strong.

This phase is a war of attrition. The question isn't who's fastest—it's who did the best job of managing the first two phases. If that's you, this is where you collect the rewards.

SBT GRVL 75-SPECIFIC TACTICS

Start conservatively - the altitude will catch up with you. The climbing is relentless so pace yourself. Save legs for the back half.

AID STATION STRATEGY

Well-supported course. Quick stops for refills. Don't rely solely on aid stations - carry enough between stops.

IN-RACE DECISION TREE

When things go sideways (and at some point they will), follow protocol instead of panic.

FLAT TIRE

1. Stay calm - this is expected at SBT GRVL 75, not a crisis
2. Flip bike upside down or lean against hip
3. Check if sealant is working (spin wheel, look for bubbles)
4. If hole visible, insert plug immediately
5. If plug fails or sidewall cut, replace tube
6. Reinflate to race pressure (check your weight table)
7. Spin wheel to verify no rub
8. Resume at Z2 for 2-3 minutes to settle back in

DROPPED FROM GROUP

1. Don't panic - emotional response costs more energy than you have
2. Assess honestly: were you overextended or did they surge?
3. Find YOUR sustainable pace (probably Z2-low Z3)
4. Look for riders at similar pace within 30-60 seconds
5. Form new working group if possible - communicate intentions
6. If solo, accept it - focus on YOUR race, not theirs
7. Use solo time gaps to fuel and recover without group pressure

BONKING

1. Consume 2-3 gels or 200-300 calories IMMEDIATELY
2. Keep pedaling lightly - don't stop. Ignore negative thoughts - they're lying to you.
3. In 5-10 minutes, you'll feel the sugar hit.
4. Drink water.
5. Fuel aggressively for next hour to rebuild glycogen stores
6. Gradually ramp effort.

CRAMPING

1. Consume sodium (salt tabs or pretzels/chips) + 16oz water immediately
2. Stretch gently - don't force it or you'll tear muscle fibers
3. Drop to Z1-Z2 for 10-15 minutes minimum
4. Back off intensity by 10-15% even after cramps resolve
5. Continue aggressive sodium intake rest of race
6. Don't resume hard efforts until cramping completely resolved

Mental Landmarks

Long races have predictable psychological phases. Knowing when they tend to show up makes them easier to handle.

THE HONEYMOON (MILES 25–60)

Everything feels easy. Legs are fresh. Groups rolling smooth. HUGE temptation to go hard and 'get ahead.' DON'T. This is the setup for the dark patch at mile 130. Stay disciplined now, dominate later. Patience wins SBT GRVL 75.

WHERE THE FIELD SHATTERS (MILES 80–110)

The rollers blow apart groups. You'll see attacks fly. People will drop. Stay disciplined. DO NOT chase efforts you can't sustain. The real race hasn't started yet. Save your matches for when they matter - miles 150+.

THE DARK PATCH (MILES 120–150)

Where motivation dies. You've been out here 7-9 hours. Everything hurts. The finish still feels impossibly far. This is EXPECTED - not a crisis, not unique to you. Use your performance statements. 6-2-7 breathing. Keep. Moving. Forward. One pedal stroke at a time.

SECOND WIND (MILES 155–165)

Often happens after CP3 aid station. Body and mind reset briefly. Energy returns like magic. Capitalize on this window - it doesn't last forever. This is your time to move up through the field.

LATE-RACE RELIEF (MILES 170–180)

Light at end of tunnel becomes real. Finish is close enough to taste. Bodies hurt but minds lift. Use this energy surge wisely. This is where you collect rewards from earlier discipline. Push through - you've earned this.

Your job: Recognize these moments as part of the script, not proof that you're failing. Stay on task, solve the next problem, and let the course come back to you.
The bottom line on tactics: The race isn't won in the first hour, but it can be lost there. Survive phase one. Execute phase two. Capitalize in phase three.

11 · Race-Specific Preparation for SBT GRVL 75

Every race has requirements that aren't optional. These are things that, if you skip them, the course itself will punish you. They're non-negotiable not because we're being strict—they're non-negotiable because physics and biology don't care about your intentions.

This section covers the specific preparation requirements for **SBT GRVL 75**, the weather considerations that matter, and the equipment you need to have dialed in.

NON-NEGOTIABLES

These aren't suggestions. They're requirements discovered through painful experience—either yours during training, or others' during previous editions of this race.

REQUIREMENT	BY WHEN	WHY IT MATTERS
Altitude acclimatization	Week 1–2 before race (if possible)	Racing at 7,000+ feet without acclimatization will significantly impact performance
Power meter and HR monitor	Week 1	Precise power data is critical for pacing at altitude where RPE is unreliable
Technical descending practice	Throughout training	The course has technical sections – confidence on descents prevents crashes and saves energy
Heat/altitude training	Weeks 6–10	Simulating race conditions prepares your body for the stress of altitude
Fueling plan execution	Race day	Altitude increases calorie burn – nail your fueling or bonk hard

These aren't suggestions. They're requirements discovered through painful experience—either yours during training, or others' during previous editions of this race.

Skip them at your own risk. The course won't care. It will simply expose the gap in your preparation.

WEATHER STRATEGY

Typical Conditions: Variable. Cold mornings, warm afternoons, possible afternoon thunderstorms. Be prepared for anything.

EXPECTED TIME DRIFT

SBT GRVL 75 typically runs 1-2 hours longer than best-case estimates. Plan accordingly.

CONDITIONS	TIME ADDITION
Neutral (normal wind & conditions)	**+1 hour over predicted finish time**
Mild mud or heavy wind	**+2–3 hours (course becomes bike-packing trip)**
Heavy mud (peanut butter)	**+4–6 hours (survival mode, expect 30%+ DNF rate)**

Plan accordingly: Bring more food, fluids, and mental patience than your best-case scenario assumes. Most people underestimate how long they'll be out there.

HEAT ACCLIMATIZATION PROTOCOL

Heat acclimatization delivers **5-8% performance improvements** in hot conditions through plasma volume expansion, enhanced sweating, and reduced cardiovascular strain. For races like SBT GRVL 75 where heat is a major factor, a structured protocol is non-negotiable.

THE PHYSIOLOGY OF HEAT ADAPTATION

Heat acclimatization unfolds in predictable stages:

- **Days 1-5:** Fastest cardiovascular adaptations—plasma volume expands 4-15%, resting and exercising heart rates drop 8-20 beats per minute, sweating begins earlier.
- **Days 6-10:** Thermoregulatory adaptations mature—sweat rate increases 10-25%, core temperature during exercise drops 0.2-0.5°C, sweat sodium concentration decreases.
- **Beyond 10-14 days:** Hemoglobin mass may increase 3-4%, similar to altitude training benefits.

Adaptations decay at approximately **2.5% per day** without heat exposure. Full acclimatization is lost within one month, but a "heat memory" effect allows rapid re-acclimatization in just 2-4 days for previously adapted athletes.

CORE PROTOCOLS

The Gold-Standard Active Heat Protocol (10-14 Days)
The most validated approach requires **10-14 consecutive days** of heat exposure:

PARAMETER	TARGET VALUE
Ambient temperature	30–35°C (86–95°F)
Session duration	60–90 minutes total
Time at target core temp	45–60 minutes at ≥38.5°C
Intensity	50–65% VO2max (Zone 2)
Core temp ceiling	Never exceed 39.5°C

Short-Term Protocol (5-7 Days)
When logistics allow only 5-7 days, trained athletes can achieve partial but meaningful adaptation:

- **5-7 consecutive days** of exposure
- 60-90 minutes per session at 35°C with 50% relative humidity
- Intensity held at 50% VO2max
- Expect cardiovascular adaptations (lower heart rate, expanded plasma volume) but incomplete thermoregulatory adaptations
- Faster decay rate than longer protocols—requires more frequent maintenance

Post-Exercise Hot Water Immersion (Practical Alternative)
Research demonstrates that **6-7 consecutive days** of post-exercise hot water immersion produces adaptations comparable to active heat training, making it ideal for athletes who cannot sacrifice workout quality.

Protocol specifications:

- Water temperature: **40°C (104°F)** exactly—hot but below thermal pain threshold
- Duration: **30-40 minutes** (build up from 15-20 minutes initially)
- Timing: Immediately after training while core temperature is still elevated
- Body position: Submerged to shoulders, head exposed
- Relief breaks: Sit up for 2 minutes every 10 minutes if needed

Sauna Protocols (Maintenance and Supplementation)
Post-exercise sauna bathing provides a lower-logistical-barrier option:

- Temperature: 80-100°C (dry sauna)
- Duration: 25-30 minutes per session
- Frequency: 3-4 sessions per week
- Timing: Immediately following training (most effective) or within 2 hours
- Protocol length: 3 weeks for meaningful adaptation

COOL-CLIMATE ATHLETES CAN FULLY REPLICATE HOT-CONDITION ADAPTATIONS

Athletes training in temperate climates need not travel to hot locations. Research validates that overdressing while training indoors creates equivalent physiological stimulus to environmental heat.

Indoor Trainer Heat Protocol

Environment setup:

1. Eliminate all fans—this is the primary intervention
2. Close windows and doors to prevent air circulation
3. Add space heaters to achieve 30°C+ if possible
4. Use a small, enclosed space where humidity rises naturally from sweat

Overdressing protocol:

- Thermal base layer
- Long-sleeve waterproof/windproof jacket with vents closed
- Leg warmers
- Gloves
- Beanie or skull cap

This combination in a 20°C room achieves similar physiological stimulus to training in genuinely hot conditions.

INTEGRATING HEAT TRAINING INTO YOUR 12-WEEK PLAN

Heat training compromises workout quality by elevating heart rate, reducing power output capability, and increasing perceived effort. Research consensus strongly favors reserving heat training for **easy endurance rides (Zone 2)** while completing intervals in cool conditions.

The 19-week integration framework:

WEEKS	PHASE	HEAT PROTOCOL
1–6	Base building	Normal training; no heat stress
6–7	Initial heat block	6–10 consecutive days, 60–90 min sessions
7–10	Maintenance	Heat exposure every 2–3 days
10–12	Race preparation	5–day top–up block during taper

Load management during heat training blocks:

- Reduce overall training volume by **20%** during initial heat block
- Expect Zone 2 power to feel like Zone 3-4 effort
- Control intensity by heart rate (70-80% max), not power
- Cap heat sessions at **60-75 minutes** to prevent excessive fatigue
- Schedule heat sessions to replace normal endurance rides, not add to them

RACE–DAY COOLING STRATEGIES

Pre-Cooling with Ice Slurry

Among all cooling interventions, **ice slurry ingestion** offers the best combination of effectiveness and race-day practicality. Meta-analysis data shows pre-cooling improves performance by **5.7% in conditions above 30°C**.

Optimal ice slurry protocol:

- Dose: **7-14 g/kg body mass** (490-980ml for a 70kg rider)
- Temperature: -1°C to +1°C (slushy consistency)
- Timing: After warm-up, consumed over **15-30 minutes** before race start
- Administration: Split into doses of 1.25 g/kg every 5 minutes
- Expected benefit: Reduces core temperature by **0.3-0.5°C**, creating heat storage capacity

The critical insight: pre-cooling benefits **attenuate after 20-25 minutes of exercise**. Ice slurry creates a thermal buffer that delays the onset of heat-limited performance rather than providing continuous cooling throughout the race.

During-Race Cooling Strategies

Feed zone protocol for gravel races:

1. Fresh ice socks placed down back of jersey (replace every 40km or at major climbs)
2. Cold bottles from coolers
3. Cold water poured over head, neck, and arms
4. Optional: Menthol mouth rinse (25ml of 0.01% solution every 15-20 minutes)

SAFETY PARAMETERS

Absolute limits during heat training:

PARAMETER	SAFE RANGE	WARNING	STOP IMMEDIATELY
Core temperature	38.5–39.0°C	39.0–39.5°C	>39.5°C
Session duration	45–75 min at target	>75 min	Any confusion
Heart rate	70–80% max	>85% max sustained	Erratic/uncontrollable

When to skip heat training entirely:

- Any illness, even minor
- Fever (even low-grade)
- Poor sleep (<6 hours or poor quality)
- Excessive existing fatigue
- Dehydration (dark urine)
- Within 48 hours of alcohol consumption
- Recovery week of training block

Emergency warning signs requiring immediate cessation:

- Confusion or disorientation
- Slurred speech or altered mental status
- Paradoxical chills and goosebumps (circulation shutdown)
- Cessation of sweating (dry, hot skin)
- Core temperature exceeding 39.5°C

Heat stroke occurs when core temperature exceeds **40°C with CNS symptoms**—this is a medical emergency requiring immediate cooling and professional care.

MAINTENANCE PROTOCOLS

Without continued heat exposure, adaptations decay at approximately **1 day lost for every 2 days** without stimulus. After 28 days without heat training, most performance benefits return to baseline.

Effective maintenance options (choose one):

- One 60-90 minute heat session every **3-5 days**
- 30-minute sauna sessions **3 times per week**
- One 30-40 minute hot water immersion every **3 days**

For athletes traveling to hot-weather events, **2-4 consecutive days** of heat exposure at the race venue is sufficient to restore adaptations in previously acclimatized athletes.

The bottom line on preparation: The race will test everything you didn't practice and expose every shortcut you took. The time to discover your preparation was inadequate is during training, not during the race.

12 · Race Week Protocol

By race week, the training is done. You can't add fitness in the final seven days—you can only preserve what you've built or add dumb fatigue through poor decisions.

The goal now is simple: arrive at the start line fresh, healthy, rested, and ready. Everything you do this week serves that goal.

RACE MORNING TIMELINE

3-4 hours before start: Wake up. Eat a familiar, high-carb, low-fiber breakfast. This is not the time for experimentation. Eat something you've eaten before many long rides. Target 1-2g carbs per kg body weight.

2 hours before start: Arrive at venue. Set up bike and gear. Use the bathroom (you'll probably go multiple times—normal). Begin sipping fluids.

1 hour before start: Final bike check: tire pressure, brakes working, shifting smooth. Short warm-up spin if space and time allow—10 minutes easy, couple 30-second efforts. Start pre-race nutrition (100-200 calories of carbs).

30 minutes before start: Run through your highlight reel visualization. Review your performance statements mentally. Begin settling your mind. Focus on what you can control.

10 minutes before start: 6-2-7 breathing. Three cycles minimum. Find your spot in the start corral. Check that everything you need is accessible (nutrition in right pockets, bottles full and secure).

Start: Controlled effort. Resist the urge to go with the first surge. Find your sustainable rhythm. Eat and drink early—first gel at 20 minutes, not 60 minutes.

The bottom line on race week: Less is more. You've done the work. Now let your body absorb it. Show up fresh, not fatigued from last-minute training.

RACE WEEK GEAR CHECKLIST

This checklist covers everything you need for race day. Print it. Check boxes. Don't improvise at 5am on race morning.

BIKE & EQUIPMENT

- [ ] Race bike (cleaned, lubed, mechanically sound)
- [ ] Spare wheels (if you have them)
- [ ] Tires mounted and tested
- [ ] Tubes (2 minimum, 3 if racing 100+ miles)
- [ ] CO2 cartridges (3-4 minimum) or hand pump
- [ ] CO2 inflator head
- [ ] Tire levers (2)
- [ ] Multi-tool with chain breaker
- [ ] Spare chain links (2)
- [ ] Tire plugs (bacon strips, 5-6 minimum)
- [ ] Frame pump or mini pump (backup to CO2)
- [ ] Spare derailleur hanger (if racing 100+ miles)

PERSONAL GEAR

- [ ] Sunglasses (2 pairs if possible—one clear, one dark)
- [ ] Socks
- [ ] Lightweight vest or rain jacket (if weather questionable)
- [ ] Chamois cream (pre-applied at home or packed)
- [ ] Helmet
- [ ] Toe covers or shoe covers (if temps <50°F at start)
- [ ] Winter gloves (if temps <40°F)
- [ ] Cycling shoes
- [ ] Arm warmers or arm sleeves
- [ ] Neck gaiter or buff
- [ ] Extra base layer (cold morning starts)
- [ ] Race kit (jersey + bibs)
- [ ] Leg warmers or knee warmers
- [ ] Gloves

HYDRATION & FUELING

- [ ] Water bottles (2 minimum, mounted on bike)
- [ ] Hydration pack (USWE or similar, if using)
- [ ] Electrolyte mix (pre-measured, ready to add)
- [ ] Gels (1 per hour + 2 extra)
- [ ] Bars (1 per 2 hours + 1 extra)
- [ ] Chews or blocks (optional but nice to have)
- [ ] Salt tabs (if hot conditions or salty sweater)
- [ ] Emergency real food (PB&J, rice cakes—pack in foil)

ELECTRONICS & TECH

- [ ] Bike computer (charged, route loaded)
- [ ] Power meter (calibrated, battery checked)
- [ ] Heart rate monitor (battery checked)
- [ ] Headlight (if early start or potential finish after dark)
- [ ] Taillight (safety)
- [ ] Phone (fully charged, in waterproof case)
- [ ] Portable charger (if long race)

PERSONAL CARE

- [ ] Sunscreen (SPF 30+, sweat-resistant)
- [ ] Chamois cream
- [ ] Lip balm with SPF
- [ ] Basic first aid (bandaids, antiseptic wipes)
- [ ] Any prescription medications
- [ ] Anti-chafe stick (nipples, inner thighs)
- [ ] Ibuprofen or pain reliever (for after, not during)
- [ ] Hand sanitizer or wipes
- [ ] Small pack of tissues (trust me)

EQUIPMENT CHECKLIST

- [ ] Power meter (calibrated)
- [ ] Heart rate monitor
- [ ] GPS bike computer
- [ ] Tires: 40-45mm
- [ ] Spare tubes/plugs
- [ ] Multi-tool
- [ ] Pump/CO2
- [ ] Nutrition for race duration
- [ ] Water bottles (2-3)
- [ ] Race number
- [ ] ID and emergency contact

RACE ESSENTIALS

- [ ] Race bib (pinned to jersey or race belt)
- [ ] Timing chip (if separate from bib)
- [ ] Parking pass (if required)
- [ ] Proof of registration (email confirmation)
- [ ] Cash ($40-60 for emergencies, aid station donations)
- [ ] Credit card
- [ ] Drop bag (if race allows)
- [ ] Change of clothes for after
- [ ] Towel (you'll be gross)
- [ ] Shoes for post-race (flip flops or slides)
- [ ] Cooler with ice and drinks for after
- [ ] Chair or blanket (for post-race sitting)

THE NIGHT BEFORE

- [ ] Bike ready (in vehicle or by door)
- [ ] All gear packed and checked twice
- [ ] Race outfit laid out
- [ ] Nutrition portioned and accessible
- [ ] Alarm set (with backup alarm)

14 · Women-Specific Considerations

If you're a woman training for gravel racing, your physiology is different from men's in ways that actually affect training and performance. This isn't patronizing "girl power" bullshit—it's honest acknowledgment of real differences that matter.

The good news: these differences are trainable and manageable. The bad news: if you ignore them, you're making things harder than they need to be.

Menstrual Cycle & Training

Your menstrual cycle affects training capacity. Not as an excuse to skip workouts, but as a variable to monitor and work with.

FOLLICULAR PHASE (DAYS 1–14, FROM START OF PERIOD TO OVULATION)

What's happening: Estrogen rises, body temperature is lower, insulin sensitivity is higher.

Training impact: This is typically your power window. You'll recover faster, handle intensity better, and feel stronger. Days 5-14 are often your best training days of the month.

How to use it: Schedule your hardest interval sessions, longest rides, and FTP tests during this phase when possible. Your body is primed for high-quality work.

LUTEAL PHASE (DAYS 15–28, FROM OVULATION TO NEXT PERIOD)

What's happening: Progesterone dominates, body temperature rises (~0.5°F), metabolism shifts toward fat burning, inflammation increases.

Training impact: Recovery takes longer. Interval quality might decline. You might feel flat even when doing everything right. Heart rate runs 5-10 bpm higher at same effort. Carb cravings increase (because your body actually needs more carbs—progesterone reduces glycogen storage efficiency).

How to use it: This is not the time to test FTP or push for breakthrough sessions. Focus on base miles, maintenance intervals, and recovery. Listen to your body more carefully. If Week 8 falls during late luteal phase and you feel like garbage despite perfect execution, that's normal—it's hormones, not fitness loss.

IRON CONSIDERATIONS

Monthly blood loss means monthly iron loss. Women who menstruate need roughly 18mg of iron daily (vs. 8mg for men). Athletes need even more due to foot-strike hemolysis, GI losses, and increased red blood cell turnover.

Low iron = compromised training: Fatigue, inability to hit power targets, poor recovery, elevated heart rate, shortness of breath during efforts you should handle easily.

The fix:

- Get bloodwork annually (ferritin, serum iron, hemoglobin, hematocrit)
- Target ferritin >50 ng/mL for athletes (many docs say >15 is "normal"—that's too low for performance)
- Iron-rich foods: red meat, dark leafy greens, lentils, fortified cereals
- Consider supplementation if levels are low (but get tested first—too much iron is also a problem)
- Take iron with vitamin C (aids absorption), avoid taking with calcium (blocks absorption)

Your period is not an excuse to skip workouts, but it IS a variable to monitor. Track your cycle. Notice patterns. Adjust expectations during luteal phase. Capitalize on follicular phase. This is performance optimization, not weakness.

Fueling Differences

Women's bodies process fuel differently than men's, especially during exercise.

CARBOHYDRATE NEEDS

Women need MORE carbs relative to body weight than men. Despite often being told to eat less, female athletes actually need aggressive carbohydrate intake to support training and maintain hormonal health.

Why: Women's bodies preferentially spare carbohydrate and burn more fat at rest. Sounds great, except during high-intensity efforts (which is most of gravel racing), you NEED carbs. If you're chronically under-fueling carbs, your body will:

- Downregulate thyroid function (slower metabolism, more fatigue)
- Disrupt menstrual cycle (late periods, missed periods, longer cycles)
- Compromise bone density
- Tank performance

The target for training: 5-7g carbs per kg body weight on training days. More on long ride days (7-10g/kg).

The target for racing: 60-90g carbs per hour minimum. Don't under-fuel trying to "stay lean"—that strategy kills performance AND health.

HEAT & HYDRATION

Women thermoregulate differently than men. This matters significantly for events like SBT GRVL 75 where heat is a major factor.

Women sweat less than men at the same relative intensity and environmental conditions. Sounds like an advantage (less fluid loss), but it's not—it means core temperature rises faster because evaporative cooling is less efficient.

The result: Women reach critical core temperature thresholds earlier in hot conditions, leading to earlier performance decline, higher perceived exertion at same power, greater cardiovascular strain, and increased risk of heat illness.

The fix:

- **Pre-cooling is critical:** Cold water immersion, ice vests, cold drinks before start
- **Aggressive cooling during race:** Ice in jersey pockets, cold water over head/neck at aid stations
- **Heat acclimation training is non-negotiable:** Weeks 6-10 should include heat exposure
- **Monitor core temp signals:** Goosebumps, chills, confusion, nausea = pull back immediately

Recovery Needs

Women often need MORE recovery than men at the same relative training intensity. This isn't weakness—it's physiology.

Why:

- Estrogen has anti-inflammatory properties, but it also affects tissue repair timing
- Lower testosterone means slower muscle protein synthesis
- Higher Type I muscle fiber percentage means different recovery demands
- Hormonal fluctuations (especially luteal phase) increase baseline inflammation

The practical impact:

- Back-to-back hard days might wreck you more than they wreck male training partners
- You might need an extra rest day per week compared to similar male athletes
- Sleep quality matters even more (hormone disruptions affect sleep, poor sleep worsens recovery)

What to do:

- Pay closer attention to RHR (resting heart rate) and HRV (heart rate variability)
- Don't try to match training partners if they're recovering faster—train YOUR body, not theirs
- Prioritize sleep (7-9 hours minimum, non-negotiable)
- Don't skip rest weeks

This is not permission to be lazy. You still need to train hard. But you might need to structure your hard days differently, take recovery more seriously, and accept that your training might look different from a man's even at similar fitness levels.

Pregnancy & Postpartum

This plan is NOT designed for pregnant or postpartum athletes.

If you're pregnant:

- Stop this plan immediately
- Consult your physician before continuing ANY structured training
- Modify heavily—racing is off the table, but moderate training may be safe
- Prioritize health over performance—the race will still exist next year

Postpartum:

- Wait at least 6 months minimum before attempting race-specific training
- Get medical clearance from OB/GYN and ideally a pelvic floor physical therapist
- Rebuild base fitness gradually—don't jump back into high-intensity work
- Watch for red flags: pelvic floor dysfunction, diastasis recti, return of bleeding

Equipment Considerations

Sports bra: Non-negotiable. Test on long rides, not just in the store. If it's uncomfortable for 30 minutes, it'll be unbearable at mile 100. High-impact support is essential—you're bouncing on gravel for hours.

Chamois: Women's anatomy requires women-specific design. This is not marketing—the padding placement and shape are different. A men's chamois will cause problems. Test multiple brands if needed. Numbness, chafing, or pain means wrong fit.

Saddle: Proper bike fit and saddle selection are critical. Women's sit bone width is often (but not always) wider than men's. Get a professional fit if you're experiencing numbness, pain, or discomfort. These issues don't resolve with more miles—they require equipment changes.

The Bottom Line

Your body is different. Not worse, not weaker—different. Train accordingly.

- Track your cycle. Work with it, not against it.
- Fuel aggressively. Don't under-eat trying to stay lean.
- Take heat management seriously. You're at higher risk in hot conditions.
- Prioritize recovery. You might need more than male training partners.
- Get proper equipment. Generic gear won't cut it.

Racing gravel is hard for everyone. Being a woman doesn't make it harder—but ignoring female physiology makes it unnecessarily difficult.

Do the work. Respect your body's signals. Show up prepared.

15 · Frequently Asked Questions

Q: WHAT IF I MISS A WEEK OF TRAINING?

A: One week won't kill you. Jump back in where the plan currently is—don't try to "make up" missed work. Forward progress only. If you missed two+ weeks due to illness or injury, reassess whether your race timeline is realistic.

Q: CAN I DO THIS PLAN ENTIRELY ON ZWIFT/TRAINERROAD/INDOORS?

A: Technically yes, but you're missing critical skills development. Indoor training builds fitness, but outdoor riding builds handling, pacing, and mental resilience. Do at least 30-40% of your volume outside, especially long rides.

Q: WHAT IF MY FTP CHANGES MID-PLAN?

A: Test again at Week 6-7 if you're curious, but only adjust zones if FTP changed by 5+ watts. Small fluctuations are noise. Major changes (10+ watts) mean you need to recalculate zones and adjust your workout targets accordingly.

Q: HOW DO I KNOW IF I'M OVERTRAINING?

A: Elevated resting heart rate, persistent fatigue, declining performance, irritability, poor sleep, loss of motivation. If you're hitting 3+ of these symptoms, take 2-3 days completely off, then return at reduced volume. Recovery makes you fast.

Q: WHAT IF I CAN'T HIT THE PRESCRIBED WATTS?

A: Either your FTP is set too high, or you're under-recovered. Take an extra rest day, retest FTP if needed. Don't grind through workouts at the wrong intensity—that's junk miles that compromise adaptation.

Q: SHOULD I FOLLOW THE PLAN EXACTLY OR CAN I MOVE WORKOUTS AROUND?

A: Follow the plan as written. The order isn't random—it assumes a typical M-F work schedule with weekends for long rides. Hard days are spaced for optimal recovery. If you work nights or have a non-standard schedule, shift the entire week forward/backward as needed, but don't rearrange individual workouts.

Q: HOW MUCH WEIGHT WILL I LOSE DURING THIS PLAN?

A: Your mileage may vary. Know this: losing weight and fueling performance are often in conflict. Any meaningful, long-lasting attempt to lose weight should be undertaken in the off-season, NOT during build-up to an eating contest on a bike (which is what a gravel race is). Fuel your training properly or accept compromised results.

Q: CAN I DO OTHER SPORTS WHILE FOLLOWING THIS PLAN?

A: Light activity (yoga, walking, easy swimming) is fine. Running, CrossFit, or other high-intensity sports will compromise your cycling training. Pick one goal. You can't serve two masters and expect peak performance from either.

Q: WHAT IF I GET SICK DURING TRAINING?

A: Above the neck (head cold): reduce intensity by one zone, monitor closely. Below the neck (chest, stomach): skip the workout entirely. Don't be a hero—training while sick extends recovery time and risks turning a minor illness into something serious.

Q: HOW DO I TAPER IF MY RACE DATE CHANGES?

A: If race moves earlier: condense taper to 1 week, keep intensity but cut volume by 40%. If race moves later: add 1-2 weeks of maintenance (same intensity, 60-70% volume), then taper normally. Don't panic and overtrain.

Q: IS THIS PLAN SUITABLE FOR [OTHER RACE] INSTEAD OF SBT GRVL 75?

A: Maybe. If the race is similar duration (8-15 hours) and demands (sustained gravel endurance), yes. If it's significantly different (shorter, hillier, more technical), you'll need modifications. The fitness transfers, but race-specific skills don't.

Q: WHAT IF I DON'T HAVE ACCESS TO GRAVEL ROADS FOR TRAINING?

A: Use what you have. Road riding builds fitness. Fitness translates to gravel. You'll need at least a few gravel rides (weeks 6-10) to dial in handling and equipment, but the bulk of fitness work can be done on pavement. Don't use lack of gravel as an excuse to skip training.

Q: SHOULD I TRAIN WITH A GROUP OR SOLO?

A: Both. Solo for structured intervals (better execution, no distractions). Group for long rides (mental training, pacing practice, working with others). Mix it up based on the workout goal. Don't let your training partners dictate your training stress.

Q: WHAT'S THE MINIMUM EQUIPMENT I NEED TO START THIS PLAN TODAY?

A: A bike that fits and works. Power meter (required for this plan). Heart rate chest strap (required for backup). That's it. Everything else—fancy computers, carbon wheels, aero bars—can be figured out over 19 weeks. Stop shopping and start training.

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