

Strength and Cardio Training Basics for the 40+ Rider

Build Strength & Cardio, Preserve
Muscle, and Ride for a Lifetime



STRENGTH TRAINING SYSTEMS

Disclaimer

The information provided in this guide is for educational purposes only and is not intended as a substitute for professional medical advice, diagnosis, or treatment.

Always consult with your physician or other qualified health provider before beginning any new exercise program, especially if you are over 40, have any pre-existing health conditions, injuries, or concerns about your fitness.

Stop immediately if you experience pain, dizziness, or shortness of breath, and seek medical attention if necessary.

By choosing to use the information in this guide, you acknowledge and agree that you are voluntarily participating in physical activity at your own risk, and the author assumes no responsibility for any injuries, health issues, or damages that may result.

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As you get older, strength & cardio training changes from a “good to do” to a **must-do** part of your program. Losing your strength, muscle, power and cardio capacity is a reality for every rider over 40 - and a training program with the needs of the 40+ year old rider is the best way to slow that process down.

In fact, it's the **#1 tactic** for riders who want to keep doing this for a lifetime. Get strong & fit and stay strong & fit, and you'll avoid age-related physical decline for as long as possible.

Plus, improving your strength, power, muscle mass and cardio doesn't just help you in the future - it boosts your performance now and reduces your risk of injury on the trail.

While there are a lot of ways to approach strength & cardio training, if you want to **maximize your results**, there are some basic principles that the 40+ year-old rider should stick to.

This guide breaks it all down in a simple, practical way - so you can train smarter, feel better, and ride stronger well into your 50s, 60s, and beyond.

Move Better

The foundation for better strength and cardio comes from how well you move. Tight muscles and bad movement patterns make it harder to improve and make it easier to get hurt in the process. Luckily, improving how you move doesn't have to be complicated.

Stretching

Stretching has gotten a bad rap over the last several years as being ineffective and potentially robbing you of strength and power. However, neither of those things are true and, when used right, is a great way to help you improve and maintain your range of motion and joint health.

While some studies have shown that it can decrease your strength and power, those were done by looking at stretching right before you performed a lift. As long as you don't stretch right before your strength train then you don't have to worry about that.

And while it may not produce results in a session or two, if you do it on a regular basis it can and will make a difference.

Here are some tips to help you get the most out of it:

- Doing a little bit on a regular basis is better than longer sessions spread apart. In other words, 10-15 minutes a day will beat an hour long session 1-2 times a week.
- Get into the range of motion where you start to feel tension and then focus on relaxing into the stretch. Don't force it.
- Use your breathing to help you relax into the stretch. Don't hold your breath or use rapid, shallow breaths. Take deep breaths in and focus on relaxing a little bit more into the stretch on the exhale.
- Because of this, I like to use breaths instead of time. For example. Go through 5 breathing cycles of inhales and exhales instead of just holding the position for 30 seconds.
- Don't worry about stretching every possible muscle. Focus on the areas you are tightest or the muscles that are sore from a ride or workout.

Some areas to focus on for MTB riders are the chest, lats, hip flexors, quads and glutes. If you are really short on time then the [Breztel Stretch](#) is a great option as it hits a lot of the key areas in one shot.

Original Strength Resets

There are some basic foundational movements that you used as a toddler to build the foundation for higher level movements you used as a child and adult. However, for a lot of us those foundational movements have eroded, which has weakened the base we need to move with strength and power and prevent injuries.

The Original Strength Reset routine was developed to help restore those foundational movements. It consists of 5 things done for 2 minutes each:

- Breathing
- Head Nods
- Rolling
- Rocking
- Crawling

You can [check out a video where I break down this routine](#) and give you some tips on how to get the most out of it.

I'm a huge fan of this routine and use it almost every day. It is also a great way to warm up before a workout or a ride to make sure that you are moving well and ready to perform at your best.

Strength Training

When it comes to riding, think of strength as the glass and everything else - cardio, endurance, skills - as the liquid you pour into it.

If you've got a small glass, it doesn't matter how much you pour in, you'll run out of room fast. But if you've got a big glass, you can hold more of everything. The stronger you are, the more room you have for endurance, cardio, and skills to actually show up on the trail.

With the right approach, strength training can help you:

- Slow down and even reverse age related strength and power loss.
- Maintain and even increase muscle mass, which is vital for staying healthy as we age.
- Make hard efforts on the trail like climbs and sprints feel easier.
- Decrease the risk of getting hurt when you crash (there is some science that suggests that stronger athletes can better deal with impacts).

Training Frequency: 2–4 Days A Week Is Plenty

You don't need to hit the gym every day to see real results - especially if you're riding regularly. In fact, **how often you lift** should depend on how often you ride and how well you recover:

- **In-season** (when riding more): 2 days per week is ideal.
- **Off-season** (when riding less): 3–4 days per week if you want to build muscle or focus on strength.

The key is balance. More riding = less lifting. More lifting = less riding.

Focus on Movement Patterns, Not Muscle Groups

You don't need a "chest day" or "leg day." In fact, that kind of bodypart training split is outdated for mountain bikers - especially for those of us over 40.

Instead, build your workouts around the **six key movement patterns** that translate to the trail:

1. **Squat** – Builds strength and mobility for climbing, cornering, and standing pedaling efforts.
Suggested Exercises: Goblet Squat, Box Squat, Split Squat, Step-Up
2. **Hinge** – Develops posterior chain power for hip-driven movements like pumping terrain, absorbing impacts, and manualing.
Suggested Exercises: Romanian Deadlift, Kettlebell Swing, Glute Bridge, Deadlift
3. **Push** – Improves upper body stability and control for technical descents, cornering, and staying solid through rough terrain.
Suggested Exercises: Push-Up, Dumbbell Bench Press, Overhead Press, Incline Press
4. **Pull** – Enhances posture and upper back strength for climbing out of the saddle, lifting the front end, and handling technical features.
Suggested Exercises: 1-Arm Dumbbell Row, TRX Row, Pull-Up, Band Pull-Apart
5. **Carry** – Strengthens the core and grip to stabilize your upper body when standing and maneuvering the bike under fatigue.
Suggested Exercises: Farmer Carry, Racked Carry, Suitcase Carry, Waiter Carry
6. **Rotate/Anti-Rotate** – Builds core control for maintaining body position through corners, switchbacks, and technical transitions.
Suggested Exercises: Pallof Press, Russian Twist, Cable Chop, Landmine Rotation

Also consider mixing in **unilateral (single-leg or single-arm) and bilateral (two-leg/two-arm) variations**. This improves your balance, coordination, and strength symmetry.

Isolation exercises like curls and tricep extensions? Totally fine. They can support joint health and muscle preservation - just don't make them the focus.

Sets, Reps, and Effort: Keep It Simple, Smart, and Safe

Here's the sweet spot for most of your training:

- **2–4 sets** per movement
- **5-15 reps** per set (80% of your training should be here)
- **Leave 1–3 reps in reserve (RIR)** and avoid going to failure
- **The Perfect Rep** - Each rep should be done with a **slow, controlled descent** into a full stretch on the muscle(s) being used, **a slight pause at the stretched position** and then a **fast but controlled lift** - when you feel your rep speed start to slow down significantly, that's your sign to stop.

This approach lets you train with intensity **without burning out** or increasing injury risk.

You can sprinkle in some lower reps (3-5 reps) and higher-reps (15–20 reps) for variety. Just **avoid max-effort singles and doubles (1–2 reps)** - the risk isn't worth it for most riders.

Use Straight Sets or Supersets - Not Everything Has to Be a Circuit

Circuit training (where you do 3–4+ exercises in a row with minimal rest) is popular - but it's not great for building strength. Don't make the mistake that so many riders do and try to turn strength training into cardio training.

Instead:

- Do **straight sets** for your main lifts. This is where you do a set for an exercise, rest for 1 - 3 minutes and then repeat until you've finished all the sets for that exercise.
- Use **supersets** for efficiency. This is where you pair two exercises together, doing one, resting for 1-2 minutes before doing the next exercise, resting for another 1-2 minutes and repeating until you have done all of the sets for both exercises. Pairing a Push and a Pull exercise or an Upper Body and Lower body exercise is a good way to use this method.

In addition, keep your workouts tight and focused: **3–6 total exercises** is plenty. More is not always better, especially as you get older.

Isometrics - They're a Secret Weapon for Longevity

Isometric exercises (where you create tension without movement) are gold for:

- Core and joint stability
- Breathing under tension (which has a direct transfer over to your cardio on the trail)
- Supporting healthy blood pressure (several studies show they are just as effective as blood pressure medication)
- Injury prevention from training (hard to get hurt when you aren't moving)

I like to use Isometrics for building strength and “movement based training” for building muscle and improving your movement patterns. As we get older, the heavy loads needed to build strength with movement based training starts to break you down faster and the risk to benefit ratio drops off quickly.

A good way to use them is to either do [Isometric Holds](#) (where you hold a position for 30-90 seconds) or [Ramping Isometrics](#), where you “ramp up” the tension from 50% to 100% over a minute.

They're also perfect when equipment is limited or joint pain makes dynamic movements tough. Ideally, add **2-4 isometric exercises** to your routine. You can also use Isometrics as a stand alone workout when you are traveling, short on time or coming back from an injury.

Progress Gradually: Follow a Simple 4-Week Wave

Progressive overload is key - but pushing too hard, too fast backfires.

Here's a better way:

- **Week 1:** Easy (3 Reps In Reserve/ RIR)
- **Week 2:** Moderate (2 RIR)
- **Week 3:** Hard (1 RIR or near failure)
- **Week 4:** Deload (back to 3 RIR)

You can do this by gradually adding weight, adding reps or even decreasing your rest period.

For example, find a weight you can do for at least 5 reps and try to add 1-2 reps each week. When you get to 15 reps add some more weight and decrease the reps again.

You can also stick with the same weight and reps and decrease your rest periods, starting with 2 minutes and decreasing your rest by 10 seconds each week until you get down to 1 minute. At that point you can increase the weight or reps and repeat the process.

This lets your body adapt and bounce back stronger - and helps you train hard **without wrecking your recovery**.

Stick With a Program Long Enough to See Results

Workouts like CrossFit, the concept of “muscle confusion” and mistaking soreness with progress have created a fitness culture where most riders change workouts too often.

But for those of us over 40, **more consistency = better results**. The truth is that changing exercises is the least important part of a strength training program.

As long as you are making progress with your strength levels then you are better served by sticking with the same basic workout program.

- Stick with the same program for at least **4–8 weeks**. In some cases I’ve seen results from sticking with the same basic program for up to **12-16 weeks**.
- Use that time to improve your technique and gradually increase weight or reps
- This leads to less soreness, better mastery, and fewer injuries

This means you might use the same workout for two of the 4 Week Waves described about. Only change workout program once progress slows. Until then, keep building.

Important Side Note: Ignore Social Media

You don't need to max out your deadlift or box jumps to see results. Social media is filled with cool-looking feats of strength that don't always serve your goals as a 40+ year old rider.

You also have to factor in that pro riders or younger riders with fewer responsibilities have much more time to train and recover. This means that they will push themselves harder and do a lot of extra exercises - how someone with 4 hours a day to train will look a lot different than someone who has less than 4 hours week a train.

Stick to the basics. Master them. **Progress slowly and sustainably.**

Cardio Training

Why Cardio Matters More as You Age

You can have strong legs and solid bike skills, but if you're gassed halfway up a climb, none of it matters. While strength plays a big role, riders over 40 often find that cardio is ultimately what holds them back. The right approach to cardio conditioning lets you:

- Ride longer with less fatigue
 - Recover faster between hard efforts
 - Stay sharp and confident on technical terrain
 - Stay healthy so you can keep riding for a lifetime
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Step 1: Fix Your Breathing

If your breathing is out of control, your energy will be too. One of the best ways to improve your breathing is **nasal breathing**.

Benefits for riders 40+:

- Improves CO2 tolerance → delays fatigue
- Prevents overbreathing → more efficient oxygen use
- Strengthens respiratory muscles → better breathing under stress
- Keeps you calmer and promotes faster recovery

A good way to work this into your routine is to **be conscious of your breathing during your regular activities and making sure to only breath through your nose**.

Another way is to go for **30-45 minute walks focusing on nasal breathing** - walking is great for recovery and breathing through your nose turns it into a low intensity cardio session.

Another important strategy is to **build your CO2 tolerance through Breath Holds**.

Carbon Dioxide (CO2) isn't just "waste gas." You actually *need it* for oxygen to be delivered from your blood into your working muscles. The problem? CO2 is also what triggers the panicky "I can't catch my breath" feeling.

By training your body to handle higher CO2 levels, you can push back that panic response, stay relaxed longer, and deliver oxygen more efficiently to your muscles.

- **CO2 Tolerance Training Breath Holds:** Take a normal inhale and exhale. On the exhale hold your breath until the first urge to breathe. Breath normally (preferably through your nose) and then repeat. Do 5 reps of this workout after strength training or before a ride 1–2x per week. **NOTE:** *This is not a breath hold competition and so don't push it. If you do you can pass out so be smart and this is a perfectly safe thing to do.*

Step 2: Build Your Aerobic Base

Think of aerobic capacity as the *foundation of your fitness pyramid*. The bigger your base, the higher your performance ceiling.

- A strong aerobic base means faster recovery between climbs, quicker turnaround after hard training, and the ability to handle longer rides without fading.

Zone 2 Cardio:

- 30-60 minute steady-state effort at 60–70% of max heart rate (you should be able to talk, but not easily).
 - Zone 2 Workouts are a great option if you're not riding much - they improve recovery and maintain (or even improve) your aerobic base.
 - If you're already getting 3-4 rides per week, you don't need as much Zone 2 off the bike.
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Step 3: Add Anaerobic Training (Intervals)

Once you've got a solid base, it's time to sharpen your ability to surge up climbs, hammer through technical sections, and recover between hard efforts. While intervals are important, as a 40+ year old rider you have to limit how much you do so you don't overwhelm your ability to recover.

A good way to do this is to do 3–6 rounds of one of these two types of intervals:

- **Power Intervals (Alactic):** 6–10 seconds all-out, then rest 2–3 minutes. Builds explosive snap for steep pitches. Start with these if you are new to interval training or if you need to build your max speed and power on the trail.
- **Capacity Intervals (Lactic):** 30 seconds hard, then 3-5 minutes recovery. This trains you to repeat hard efforts without falling apart. Use these if you have the speed and power you want but need to work on sustaining it longer into your rides.

These workouts teach your body to go hard, recover, and go again - exactly what you need on the trail.

NOTE: *You may want to eventually use harder, more advanced interval workouts but these two types of intervals are a great starting place for using them in your program.*

Weekly Plan for Riders 40+

Here's a practical framework to keep you riding strong and fresh:

- **If you ride less than 3-4 times a week then add in 1–2 Zone 2 cardio sessions**
 - **1 Anaerobic Interval Session** (3–6 rounds of either Power or Capacity Intervals)
 - **1–3 Easy Walks** (30–45 minutes, focus on nasal breathing for recovery)
 - **1–2 Breath Hold Sessions** (5 reps, add them into your cardio workouts or before rides)
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Key Takeaways

- Fix your breathing through nasal breathing to maximize your cardio.
 - CO₂ tolerance training delays fatigue and helps you stay calm under pressure.
 - Use Zone 2 when you're not riding much; focus on the bike when you are.
 - Intervals are essential for sharpening trail performance - but don't overdo it.
 - Recovery walks + nasal breathing improve recovery, fix your breathing and build CO₂ tolerance..
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Sample Training Program

Here's how to put this all together. Below you will find a simple workout program that combines 2 days of Strength Training with the Cardio Training suggestions.

Sunday	Rest or 30-45 min. Walk + Nasal Breathing
Monday	Strength Workout 1
Tuesday	Ride or 30-60 min. Zone 2 Cardio
Wednesday	Cardio Workout
Thursday	Strength Workout 2
Friday	Rest or 30-45 min. Walk + Nasal Breathing
Saturday	Ride or 30-60 min. Zone 2 Cardio

This is just a suggestion, you can move the workouts around to fit your schedule. In general, try to give yourself at least 1-2 days between Strength Training Workouts. You can also fit in the Cardio Workout after a Strength Training Workout as well.

Strength Training Workouts

On the next 2 pages you will find a total-body, 2x/week plan that uses Isometrics and movement-based training to keep you strong and riding pain-free.

Start with a Warm Up. If you don't have a preferred warm up then click the provided link to see a follow along video of one I like to use.

Do 1 set of each of the Isometric Exercises. Use Straight Sets for the Movement Based exercises, giving yourself 1-3 minutes rest between sets.

Follow the 4 Week Wave covered in this guide to progress your workouts each week. Remember that you can repeat this workout for multiple 4 Week Waves as long as you are continuing to add weight and/ or reps.

Click on the name of the exercise to see a video demo of how to do it.

Strength Workout 1

Warm-Up:

- [Follow Along Warm Up Video](#)

Isometric Exercises (1 set of each exercise):

Use a large towel for Ramping Isometric exercises.

1. [Back Neck](#) – Ramping Isometrics (30 sec. @ 50%/ 20 sec. @ 80%/ 10 sec. @ 100%)
2. [Chest Press](#) – Ramping Isometrics (30 sec. @ 50%/ 20 sec. @ 80%/ 10 sec. @ 100%)
3. [Row](#) – Ramping Isometrics (30 sec. @ 50%/ 20 sec. @ 80%/ 10 sec. @ 100%)
4. [Deadlift](#) – Ramping Isometrics (30 sec. @ 50%/ 20 sec. @ 80%/ 10 sec. @ 100%)

Movement Based Exercises:

1. [Kettlebell Deadlift](#) (You can use a DB if needed)– 2-3 sets x 5-15 reps
2. [Pushup \(elevated if needed\)](#) – 2-3 sets x 5-15 reps
3. [3 Point DB/ KB Row](#) – 2-3 sets x 5-15 reps
4. [Farmer Carry](#) – 2-3 sets x 100 paces
5. [Kneeling Inch Worm](#) – 2 x 15-30 Isometric Hold per side

Cool-Down: 5 min. deep nose breathing + stretching (quads, lats, hips)

Strength Workout 2

Warm-Up:

- [Follow Along Warm Up Video](#)

Isometric Exercises (1 set of each exercise):

Use a large towel for Ramping Isometric exercises.

1. [Butterfly Crunch](#) – Ramping Isometrics (30 sec. @ 50%/ 20 sec. @ 80%/ 10 sec. @ 100%)
2. [Kneeling Single Arm Shoulder Press](#) – Ramping Isometrics (30 sec. @ 50%/ 20 sec. @ 80%/ 10 sec. @ 100%)
3. [Double Hip Flexor](#) – Ramping Isometrics (30 sec. @ 50%/ 20 sec. @ 80%/ 10 sec. @ 100%)
4. [Squat Hold](#) – Hold bottom position for 30-90 seconds

Movement Based Exercises:

1. [Goblet Squat](#) – 2-3 sets x 5-15 reps
2. [Half Kneeling Shoulder Press \(DB or KB\)](#) – 2-3 sets x 5-15 reps per arm
3. [Bent Row](#) – 2-3 sets x 5-15 reps
4. [Single Arm Farmers Carry](#) – 2-3 sets x 5-15 reps
5. [Marching Bird Dog](#) – 2-3 sets x 5-15 reps ([Video Demo](#))

Cool-Down: 5 min. deep nose breathing + stretching (quads, lats, hips)

Cardio Workout

You can perform this workout on an indoor trainer, a stationary bike, a rower or any other piece of cardio training equipment you like. You can even get outside and do it on your mountain bike. While you can also use running, just make sure that your body is adapted to running before jumping into this workout with some easier Zone 2 Cardio runs for a few weeks.

Breath Holds	Start your workout with 5 Breath Holds
Zone 2 Cardio	Do 10-15 minutes Zone 2 Cardio
Intervals	Do 3-6 rounds of either the Power Intervals or Capacity Intervals
Zone 2 Cardio	Do 10-15 minutes Zone 2 Cardio

You're Not Alone - And You're Not Done Yet

I know what you're going through - because I've been there myself. The aches that don't go away. The frustration of not bouncing back like you used to. The mental battle between still loving to ride hard... and wondering if your body can keep up.

But here's the good news: You don't have to give up riding and training. You just need a smarter approach.

And you don't have to figure it all out alone. Every week, I'll send you practical, proven tips to help you stay strong, pain-free, and confident on the bike. These aren't cookie-cutter fitness tips - they're hard-won insights from the front lines of strength, movement, and longevity specifically for the 40+ rider.

Stick with me. You've still got a lot of great riding ahead of you and I'll show you how.

Ride Strong,

James Wilson
MTB Strength Training Systems

p.s. If you enjoyed the workout in this guide and want help putting together full 12 week program, check out the **MTB 40+ MTB Rider Training Program**.

[Click here to learn more and get started today](#)