

Safety and Education
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Building Endurance



INTRODUCTION

In Volumes 20 and 21 we talked about how to train to get faster and ride further. Those articles were provided for those of you who wish to move to a faster group within the club. Some of you, however, don't wish to ride faster but would like to be able to ride further, and perhaps burn a few more calories. So how do you train your body to do that?

The article below provides insights. Enjoy!

How to Build a Cycling Endurance Base—and Why It's So Important to Do So

LAY THE FOUNDATION BEFORE YOU BUILD ON THE MILES.

By Molly Hurford /Published May 22, 2023 / Bicycling.com

Whether you plan on racing a 200-mile [gravel grinder](#), a 40-minute [cyclocross race](#), or simply want to feel comfortable on a local [group ride](#), your cycling fitness starts with having a strong endurance base.

You may have heard the term “base phase” or “base building” tossed around by other cyclists and wondered what the heck they were talking about. Well, we have everything you need to know about base training, including what building a cycling endurance base really means, why you need it, and the different strategies you can employ to develop it.

What exactly is a cycling endurance base—and why do you need it?

You could say [endurance](#) is fatigue resistance or durability—the time before you start to fade on the bike. In the simplest terms, an “endurance base” simply refers to your [aerobic fitness](#)—your ability to do long, slow(ish) distances on the bike. But for a cyclist, other factors go into building a base: your fitness (cardiovascular and [muscular](#)), but also [technical skills](#), neuromuscular connections, [fueling strategies](#), and even skin considerations.

Ultimately, a cycling endurance base is about what you can do on a [long ride](#), which can be hard to measure. “As coaches, we tend to look at 20-minute [power](#) because that’s easy to measure,” says cycling coach Jim van den Berg, creator of the JOIN training app. He has been coaching pro and amateur cyclists for more than a decade in the Netherlands, and the discussion around the importance of endurance is a trending topic for pros and recreational riders alike these days.

“Ride longer, at a conversational pace, consistently.”

“The problem is, does [power] really translate in terms of your endurance?,” he asks. “For most cyclists, what’s really relevant is what you can do in the fifth, sixth, or even seventh hour of a ride or race, because most of our [goals](#) are in longer events. And that’s what endurance is about: how you perform after a few hours on the bike.”

A base level of endurance isn’t quite the same thing as just defining your [endurance pace](#)—a.k.a. zone 2. But knowing your endurance pace is important for training to build that base, because it is that “all-day pace” that will get you to the end of a long ride.

Endurance pace is where you can have a sweaty conversation, but you may need to occasionally pause for a deep breath. Technically speaking, it’s defined as riding at 56 to 75 percent of your [functional threshold power](#) or 86 to 83 percent of your threshold [heart rate](#).

“Really, endurance is about increasing [efficiency](#),” van den Berg says. When assessing endurance base, he looks at both heart rate drift and energy usage. If your heart rate starts steadily climbing in the second half of a four-hour ride, despite putting out the same [power](#), your base isn’t very strong.

Similarly, if you're relatively untrained, you're likely to be burning more [carbohydrates](#) than fat, even at these low intensities when your body should turn to fat for more steady energy. Boost your endurance base, and your body becomes more efficient at processing energy, and that will allow you to put [power to your pedals](#) steadily for longer.

To sum it up: You want to think of your cycling endurance base as your foundation, similar to when building a house. You need that steady slab of concrete on which you build the rest of your structure. Similarly, if you never do a ride over an hour, but your big goal for the season is a [century](#), it's easy to see how you'd quickly crumble during that event. You might make it to the finish line eventually, but it's not going to be pretty.

How do you build (or improve on) your endurance base?

It sounds obvious, but riding more often and for [longer durations](#) is the simplest way to build an endurance base. Unlike running, where there are concerns about load and higher risks of impact [injuries](#), cycling allows you to build volume quickly, meaning creating that endurance base is a fairly simple proposition. In fact, it's not unlike Michael Pollen's advice for diet: "Eat food, not too much, mostly plants."

For endurance in cycling, simply think: "Ride longer, at a conversational pace, consistently."

The most important thing to keep in mind is [avoiding going too big](#), too soon. You don't want to do one monster week, get ultra-[fatigued](#), and skip the entire next week—a mistake van den Berg sees often. A slow and steady build up to bigger volume is a smarter, safer approach. And if you're new to adding more volume, make sure you keep the [intensity](#) low most of the time to avoid over-taxing your system.

If you notice yourself feeling extremely [tired](#) despite a full night of [sleep](#), you're always hungry, or you're getting [sick](#) more often, those are [signs you're doing too much](#) and need to dial it back. As van den Berg says, one nine-hour ride and a week off to recover isn't as conducive to base-building as nine hours of riding spread over four or five days with only one day off to [recover](#).

As you're building your base, van den Berg suggests focusing on [heart rate](#) rather than [power](#). "Heart rate is better because you measure how intense the work is for your body—the internal measure—instead of what the external output is," he says. "I prefer athletes use heart rate for low-intensity work, and then use power for [high-intensity work](#) where the output is the focus."

What if you don't have time to put in big hours on the bike? Well, here's where the science gets interesting. A [recent study](#) put recreational cyclists through two different training interventions: One group focused on volume and low intensity, riding eight to 10 hours per week over 10 weeks. The other group focused on high intensity and low volume, riding under 2.5 hours per week over the 10-week period. At the end, the rider's durability—how long they could last on

the bike before they started to fade—was measured and both groups showed the same improvement.

Of course, this is great news for a time-crunched cyclist, but there are still major benefits to adding in more volume. It's important to note that this study focused on very casual cyclists. More seasoned riders who already are riding a few days a week will need to increase hours if they want to improve their base. Still, for someone who has little time to spare, focusing on high intensity is your best move. (FYI, this is why, with van den Berg's [JOIN training app](#), you're able to choose how many hours you have available for training each week, and the lower your training hours, the more your plan shifts to [high-intensity workouts](#).)

Even for new riders who are just getting started building a base, van den Berg is a fan of sprinkling in some *short* [high-intensity efforts](#) during a week of training. This helps you develop more efficiently as a cyclist, and enables you to more seamlessly shift into your next phase of training.

“Back in the 1980s, we were really dogmatic about taking a few months to focus solely on [low-intensity training](#),” he says. “But now we know it's beneficial to still include some high-intensity work even during base phases—there's a reason you see so many road pros hopping into cyclocross races or races on online platforms during the time when they used to be only doing low-intensity [rides].”

There's also the technical, fueling, and even skin-based improvements and learnings that come from more hours on the bike—and these are critically important if your cycling goals include [long-distance events](#). If you only ride for 30 minutes at a time, your fitness might improve, but you won't develop the [fueling practices](#) you'll need on race day. And to be blunt, your butt won't be adapted to long hours in the saddle, so you may struggle with [numbness](#), [chafing](#), or [saddle sores](#) when you do go long.

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How long do you need to build a cycling endurance base?

Normally, a base-building phase lasts around three months or about 12 weeks. If you train year-round, you may be able to speed it up because you'll already have a certain amount of aerobic fitness in the bank. If you're [new to cycling](#), enjoy the process and ease in.

If you're in a rush to start race training and you need to build your base quickly, you can follow a simple [four-week base plan right here](#). You may not see immediate changes—van den Berg says most endurance gains take around eight to 12 weeks to notice—but you will be ready to start progressing toward whatever goal is on your [calendar](#).

What do you do after a cycling endurance base phase?

Once you've built a solid base, you can start trading some volume for some intensity. Don't skip those longer, [easier rides](#) altogether, though. Simply swap out one or two of your endurance rides for [interval-based rides](#) and leave the rest as they were.

The most important thing to remember is that you don't want to add high intensity on top of high volume—make sure you're adjusting your ratio by dialing back the hours as you ramp up your effort. "The worst combination you can have is [high intensity](#) on top of high volume," van den Berg cautions. "You won't be able to actually hit the really high intensity—your efforts will always be dampened by lingering [fatigue](#) from the high volume—and you'll struggle to maintain the high volume because your energy will be low."

If you have an event in the next few months, once you have your cycling endurance base established, you can start searching for a more focused [training plan](#) that leads into your event and includes [workouts](#) that will get you to the start line prepared for the race.

Okay riders, that's it for this week. Get out there and ride. Until next time,

Make Every Ride Epic,

Darryl