

# Bike Fitting Isn't Just for Racers

## How Proper Fit Can Help Riders Go Farther, Feel Better, and Ride Longer



### Ben Petty

**S**pend enough time around cyclists, and you'll hear the phrase "dialed in." It usually refers to a machine that looks and feels right - saddle height just so, handlebars aligned, cleats snugged into the right position. But what does "dialed in" really mean? And more importantly, how do you get there? For many non-competitive cyclists, the idea of a professional bike fit can feel like something reserved for elite racers chasing marginal gains. If you're riding gravel backroads, spinning rural highways at sunrise, or chasing singletrack after work, you may not care much about shaving off a few watts. You just want to ride comfortably and keep riding for years to come. For many riders across the Midwest, the answer increasingly involves a professional bike fit. Not because it's trendy, but because cycling is an unnatural movement pattern, and the human body doesn't always respond kindly when the machine underneath it is misaligned.

Few people understand that better than Chris Balsler, a Minnesota-based professional bike fitter and founder of Bicycle Fit Guru. With 36 years of experience, Balsler has watched the practice



evolve from tape measures and angle charts to pressure mapping and motion analysis - and back again toward a more human-centered approach.

### Cycling Is Not Natural

Walking is natural. Running is natural. Cycling is not. "When we walk, we have ground reaction force," Balsler explains. "The reason you can push off and go into the next gait is that the ground is solid. The pedal spindle is not solid." That difference changes everything.

On a bike, you're fixed to a machine. Your feet are clipped in. Your pelvis is supported by a narrow saddle. Your hands stabilize your upper body. Your head often juts forward to see down the

road or trail. Unlike running, where subtle adjustments happen instinctively, cycling locks you into repetitive motion - thousands of revolutions per hour. "Cycling is an accommodative movement pattern," Balsler says. "It is not natural. In order to accommodate, we have to have exposure to it." Exposure builds adaptation, but only if the setup is fundamentally sound.

### What Actually Happens During a Professional Bike Fit?

Among cyclists, the term "bike fit" can mean very different things. Some studios rely heavily on motion-capture systems and joint-angle targets. Others focus on body measurements and geometry charts.

Balsler's process begins before the rider even walks through the door. "When they sign up for an appointment online, there is a box of primary concerns the rider may have," he says. "What I do is largely based on what the rider says. So if there's a specific issue, that's the area of concentration." He is unapologetically outcome-centered. If a rider reports saddle pain, knee pain, neck tension, or shoulder discomfort, that becomes the focal point. Sometimes he calls ahead to discuss potential equipment

changes, particularly if a part may need to be installed, since that involves a cost. Transparency matters. When the rider arrives, the first step is an in-depth interview. “If they don’t have issues and they’re just new to it and trying to figure it out, I kind of walk them through what good cycling looks like,” he explains. “I like to joke that good posture in cycling is not good cycling posture.”

In other words, the upright posture we’re taught in everyday life does not translate cleanly to a bike. Cyclists operate in a forward, semi-horizontal orientation. The head moves ahead of the spine. Weight shifts differently through the hips and hands.

Balser performs a physical assessment, looking for scoliosis, mobility restrictions, prior injuries, or apparent leg-length discrepancies. He’s careful with that last one. “A lot of bike fitters tell people they have leg length discrepancies,” he says. “It’s not necessarily true. Ninety percent of the time it’s more of a tightness, range of motion, or injury.”

Only after the conversation and assessment does the rider get on the bike. Balser records a short video to show them what he sees. Rather than pointing out flaws, he frames observations



Riders on Iowa’s Fox Ridge Filth Ride. For gravel bikes, fitters will typically seek a slightly more upright posture with less weight on the hands for better stability on rugged terrain.

PHOTO CREDIT BEN PETTY

around solutions. “Nobody wants to hear you telling them everything wrong with them,” he says. “That gets in their head. I’d rather provide solutions.” From there, adjustments begin - incrementally and deliberately. And here’s where the process becomes art as much as science.

“Bike fitting is not linear,” Balser says. “It’s not predictable. No two people with the same symptom will have the exact same response to an intervention - that’s because the nervous system doesn’t always like what you do.” Raise the saddle too high, and a rider may compensate

with plantar flexion. Lower it too much, and they might start dropping their heels. The body absorbs or rejects changes in subtle ways. The fitter’s job is to read those responses and adjust accordingly.

### The Big Three Mistakes Riders Make

If there’s one theme that emerges in Balser’s work, it’s this: small setup errors can cascade into larger problems. Asked about the most common mistakes riders make when setting up their own gravel, road, or mountain bikes, Balser doesn’t hesitate.

### Cleat Placement

“Cleat placement,” he says flatly. “It’s really hard to get your cleats set up properly without somebody looking at you. A lot of fitters will say it needs to be between the first and fifth metatarsal (bones of the foot)” - but Balser rejects rigid formulas. “Finding where the person can produce the most force into the pedal is where the cleat needs to be,” he explains. “I don’t believe in measurement.” Rotation and setback are particularly tricky. Clipless pedals are designed with float to allow natural heel movement and protect the knee joint. But without a protocol, riders may misalign them, increasing stress on knees and hips.



The Biomechanics Lab for Bicycle Fit Guru is located in Minneapolis, and provides more advanced services for complex conditions, follow-ups, and medical professionals.

PHOTO CREDIT CHRIS BALSER

## Saddle Height

“A lot of cyclists ride with their saddles too high,” Balser says. “It feels better. It feels like they’re trying to straighten their legs out, like they’re walking or running.” But cycling is not walking or running. Overextending the leg alters muscle recruitment and can lead to muscle strain or knee pain.

## Handlebar Position

Online fit calculators frequently focus on joint angles and may approximate handlebar placement. Still, Balser says most riders come in with their bars in the wrong spot - either too low and aggressive, or too high and cramped. Improper handlebar placement can manifest as neck pain, shoulder tension, or numbness in the hands.

## Technology: Tool or Crutch?

Modern bike-fitting studios often feature motion-capture systems and lasers, and some bike-fitting processes use AI-driven analysis. Balser uses technology - but cautiously. “I think that the use of technology has taught me that it doesn’t do a global assessment,” he says. “When you use motion analysis or angles for bike fitting, you’re ignoring weight distribution and muscle length-tension relationships.”

Joint angles may look ideal on a screen, but that doesn’t guarantee efficient muscle activation. Balser previously used EMG (electromyography) to study muscle recruitment patterns. It taught him something important: not all bodies are built the same.



The primary studio for Bicycle Fit Guru in Seward, MN.

PHOTO CREDIT CHRIS BALSER

“Some people have huge quadriceps. Some have more glute muscle,” he says. “If I get somebody to use more glutes, but they’re much better at using their quads, I’m not helping them.” In other words, don’t fix what isn’t broken.

He does use saddle pressure mapping, but not to dictate choices. “If it maps really well and they say the saddle sucks, that saddle sucks,” he says. “Perceived comfort is the best indicator.” Technology informs. It does not override the rider’s experience.

## When Is Soreness Normal - and When Is It Not?

Every cyclist knows the dull ache after a long ride. But how can riders distinguish between healthy adaptation and harmful misalignment? “Normal ride soreness should not get worse,” Balser explains. “Over time, it should improve.” If a new

rider’s neck or back feels sore initially but improves with consistent riding, that’s adaptation. If pain lingers, intensifies, or persists long after rides, something may be wrong.

He’s blunt about the idea of “toughening up.” “If somebody has low back pain from cycling, you can’t toughen that up,” he says. Poor fit can contribute to permanent damage in the lumbar spine. Chronic knee pain, nerve impingement in the feet, carpal tunnel symptoms in the wrists, and long-term neck issues are all possible consequences.

Leg fatigue? Fine. A sore saddle area? Fine. Structural pain that worsens over time? Not fine.

## Different Bikes, Different Goals

Fit is not one-size-fits-all. The type of bike and the rider’s objectives matter.

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Triathlon bikes prioritize aerodynamic positioning and smooth transition to running. Gravel bikes typically feature a slightly more upright posture with less weight on the hands for stability on uneven terrain. Mountain bikes are particularly sensitive to component placement because modern suspension geometry is engineered with precision. “If I take a modern mountain bike and move the handlebars in front of the fork, the steering will get funky,” Balser says.

Perhaps most importantly, rider goals dictate boundaries. Highly competitive athletes may tolerate, and even thrive in, aggressive positions that recreational riders would find unbearable. “There are people who are very competitive and have very low sensory reception,” Balser says. “They can ride very long, low, aggressive positions, and they may not even look great, but they’re super fast. So you’ll leave them alone.”

On the other end of the spectrum are older riders who simply want to stay comfortable and active. “One of the things that I’m really good at is fitting people who are older and just want to be comfortable,” he says. “You just have to be willing to make the adjustments.”

### Marketing vs. Reality

Bike fitting has become a significant marketing category within cycling. AI-based fit apps promise precision. Studios advertise laser-guided knee tracking. Social media showcases dramatic before-and-after screenshots. Balser offers a note of caution. “If somebody tells you that something’s right and they have a strong marketing presence, but it does not feel right, it is not right.”

## 5 Signs It's Time for a Bike Fit

### 1. Your knees hurt in the same place every ride.

Consistent, location-specific pain often points to saddle height, cleat alignment, or stance width issues.

### 2. You experience numb hands or tingling fingers.

Too much weight on the bars or improper reach can compress nerves.

### 3. Saddle discomfort doesn't improve.

Persistent pressure or chafing may indicate saddle shape, tilt, or fore-aft positioning problems.

### 4. One side of your body feels different than the other.

Uneven pressure or fatigue may signal asymmetry in setup or movement patterns.

### 5. You've bought a new bike—or changed disciplines.

Gravel, road, and mountain geometries differ. A fit that worked on one platform may not translate perfectly to another.

Artificial intelligence relies on predefined joint angles - angles originally chosen by humans. But human bodies are variable. Tibias are not perfectly symmetrical. Ankles track differently. Knees don't always move in laser-straight lines. Comfort and sustainable power output remain the ultimate metrics.

### Why It Matters in the Midwest

For many riders in our region, cycling is more than recreation. It's community. It's solitude. It's transportation. It's competition. It's a long gravel road stretching toward a horizon of cornfields or woodlands.

When that experience is marred by pain, riders often blame themselves. They assume they need to stretch more. Strengthen more. Toughen up. Sometimes they do. But sometimes, the solution lies not in the body alone - but in the relationship between body and machine. A professional bike fit isn't about chasing perfect angles. It's about resolving discomfort, enhancing efficiency, and protecting longevity. In an era where bikes cost thousands of dollars and events may demand hundreds of miles, the investment in fit can be the difference between a season cut short and decades of healthy riding. Cycling may not be natural. But with the right adjustments, it can feel remarkably close.

Learn more about Chris's approach to bike fitting and services available, visit [www.bicyclefitguru.com](http://www.bicyclefitguru.com)

## Black Squirrel Scurry Triathlon

Merrill, WI

[www.blacksquirrelscurry.com](http://www.blacksquirrelscurry.com)



"It helps to be a little bit nuts"

Saturday,  
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8:30 am

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March 1

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Photo By: Joseph Frederick Photography



Photo By: Joseph Frederick Photography

2 mile paddle down the Prairie River, a 17.5 mile bike ride featuring the River Bend Trail out to the countryside of Lincoln County, and a 5k trail run through the Merrill Area Rec Complex and Council Grounds State Park.

Races include Relays, divisions for 19 and Under, eBike, Tandems, and Solo Aged divisions for individuals.



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