Beyond Exercise, LLC

Why Cyclists Hurt

Understanding Common Riding Complaints Through Body and Bike Fit

David Montgomery, PT, DPT

About me

David Montgomery, PT, DPT

- **Physical Therapist** & Motion Capture **Lab Manager** @ Beyond Exercise in Madisonville
- BS - Sports Biomechanics, U. of Cincinnati - 2010
- Doctor of Physical Therapy, U. of Cincinnati - 2016
- Pedal PT Bike Fit Academy - 2024
- Own mountain, gravel, tri, and fat tire bikes

Ed's Story

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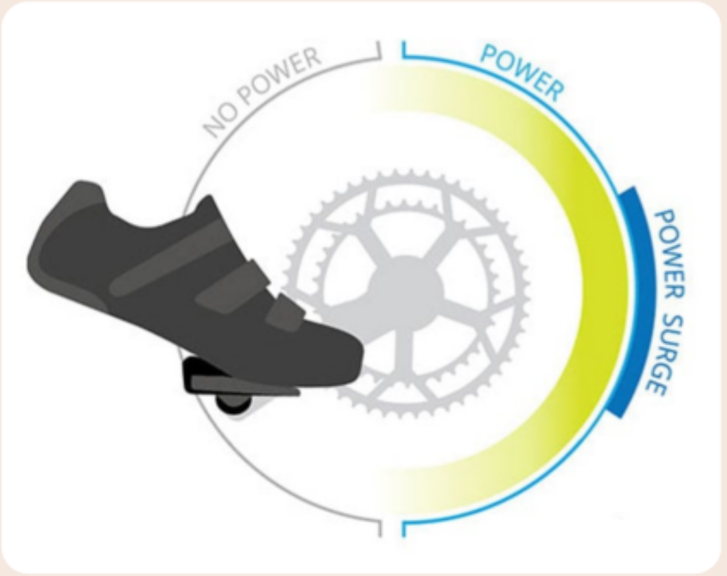
"I started having mild knee pain eight months ago... David at Beyond Exercise was able to help me stretch and eliminate the pain during the first visit without putting a wrench on my bicycle... I have over 900 miles since the first visit and am very happy with the results..."

The Rider and the Machine Are One

- Comfort and performance depend on the harmony of body and bike
- Pain is usually a signal, not just a problem
- Fixing one without addressing the other rarely lasts



Today's Roadmap

Hotspots

The five most common areas of cycling pain

Underlying Causes

How bike fit and body fitness each play a role

Potential Solutions

A few movement examples and cues

Application

Preview of what we'll practice in the workshop

“My Neck and Shoulders Get Tight”

Bike Fit Factors:

- Bars too far/low → extended reach
- Narrow bar width or saddle slid back

Body Factors:

- Stiff upper spine
- Weak deep neck flexors / scapular stabilizers
- Postural fatigue

Quick Mid-Ride Relief

Chin-tuck + scapular set + gentle thoracic extension

“My Hands Fall Asleep”

Bike Fit Factors:

- Too much weight on the hands → long reach or saddle tilt
- Incorrect bar angle / hood rotation

Body Factors:

- Weak core shifts weight forward
- Nerve tension in wrist or forearm

Strong Core = Light Hands

brace core to redistribute load

“My Back Aches”

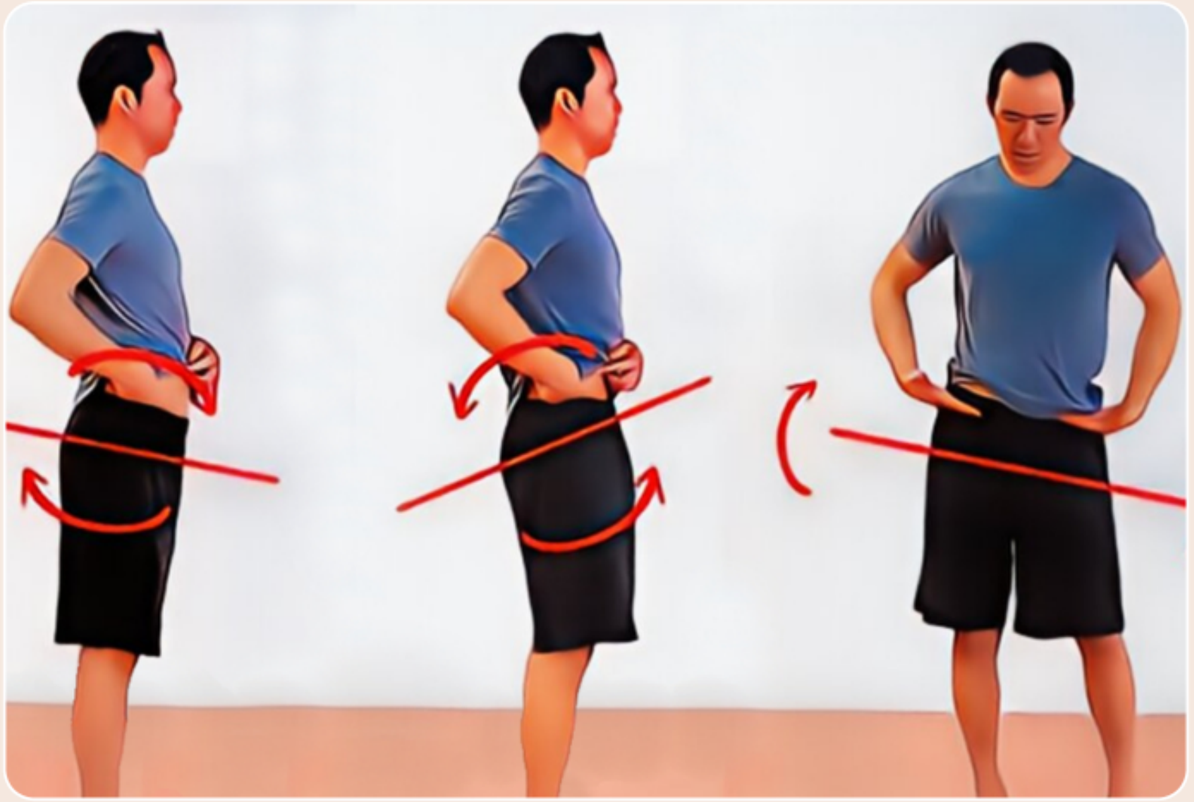
Bike Fit Factors:

- Saddle height/tilt causing pelvic rocking
- Overreach to bars

Body Factors:

- Tight hip flexors or hamstrings
- Poor lumbopelvic control

Pelvic Control on / off the Bike



“I Have Pain in My Knees”

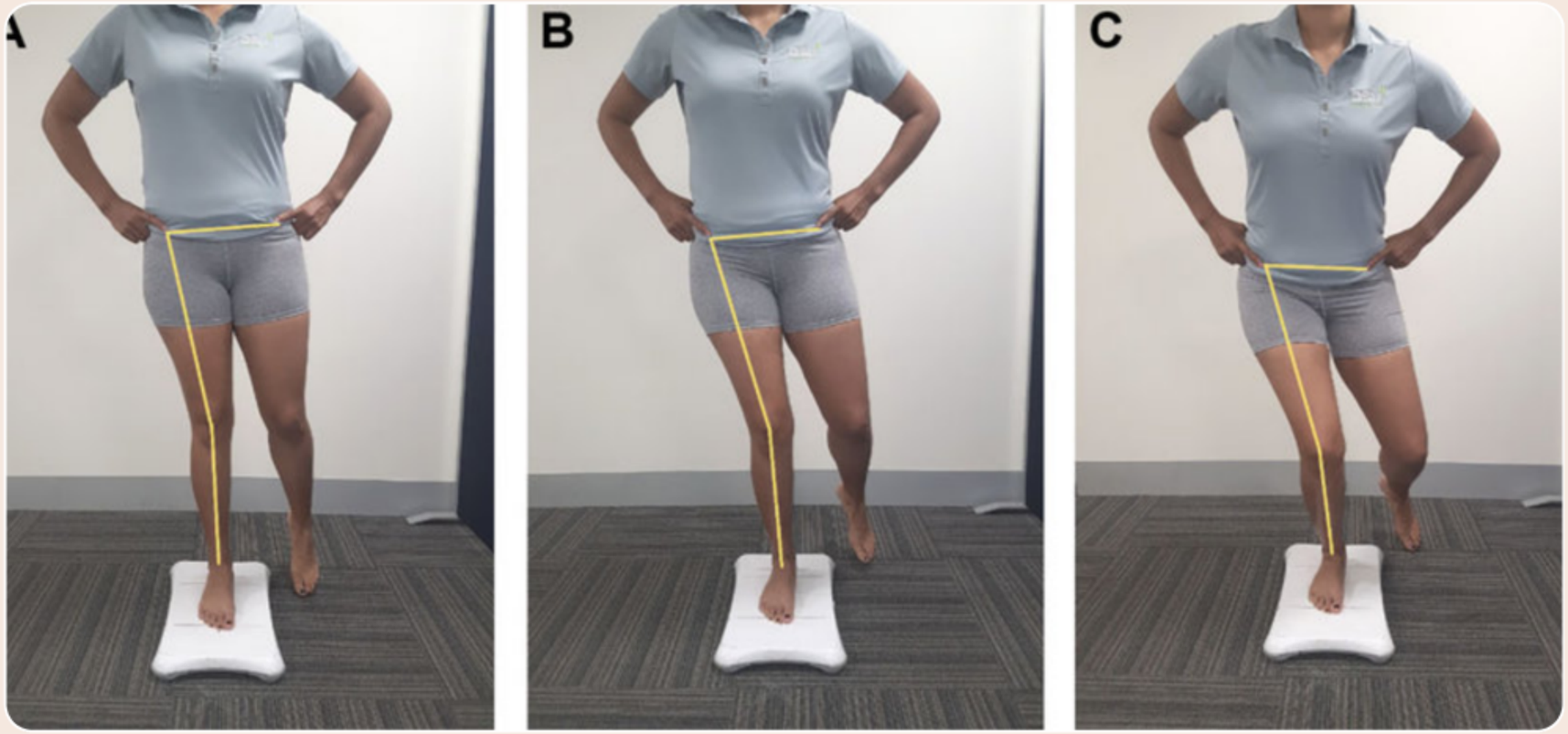
Bike Fit Factors:

- Saddle too low → front knee pain
- Saddle too high → back knee pain
- Cleat rotation or crank mismatch

Body Factors:

- Hip weakness or poor tracking control
- Limited ankle mobility

Train the Hips to Protect the Knees



“My Feet Burn or Go Numb”

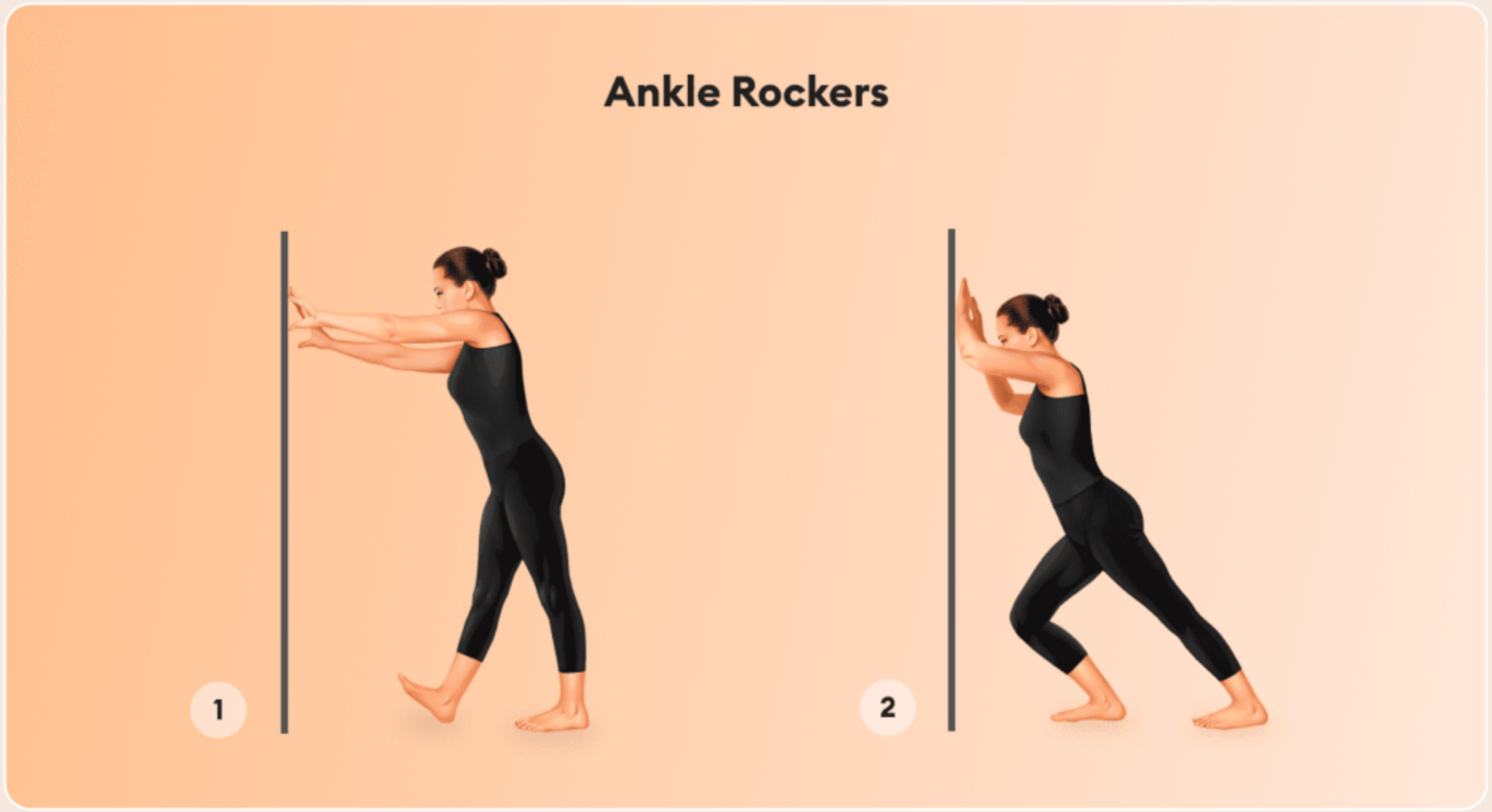
Bike Fit Factors:

- Cleat too far forward
- Shoe too tight or poor insole support

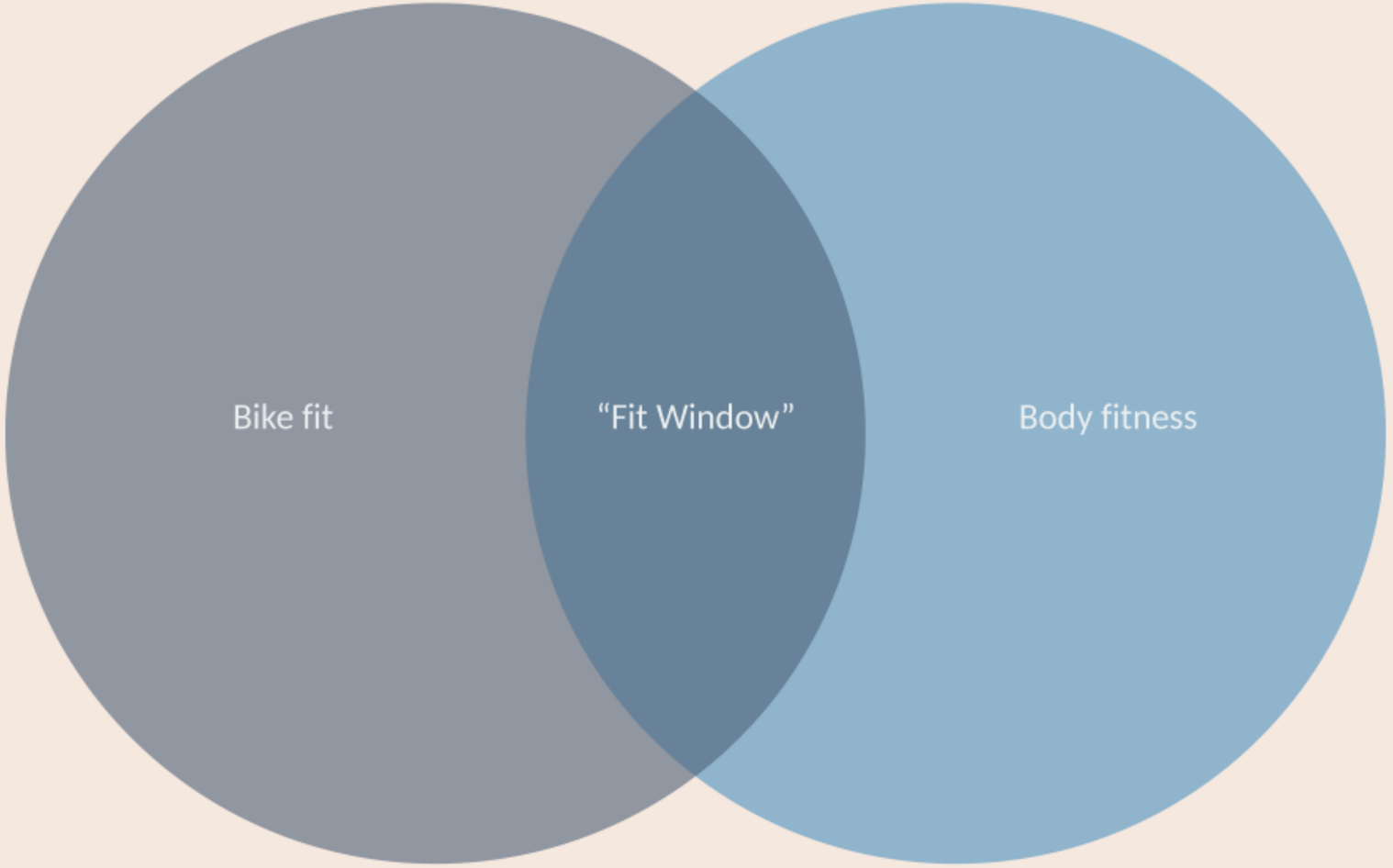
Body Factors:

- Calf tightness
- Weak intrinsic foot muscles

Restoring the Foot's Role



Bike + Body: Finding the Sweet Spot



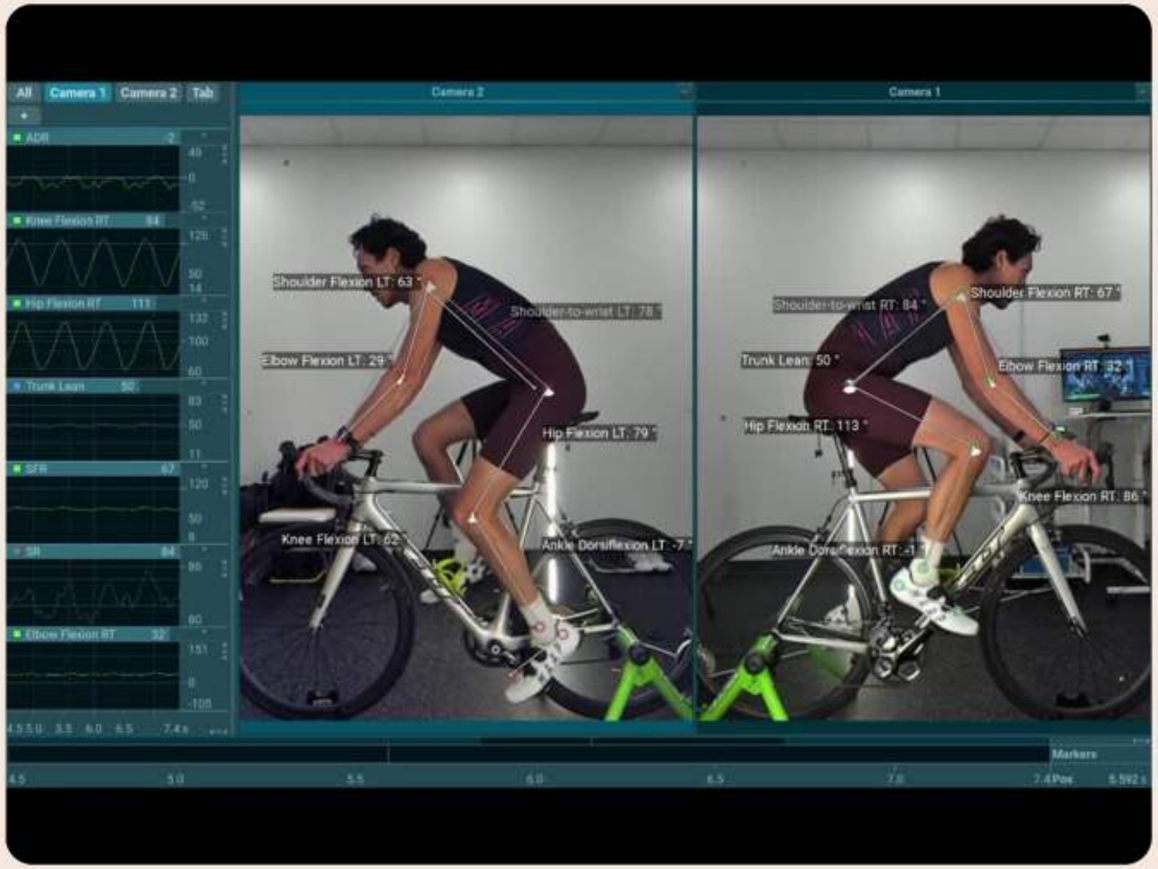
How to Tell What's Causing the Problem

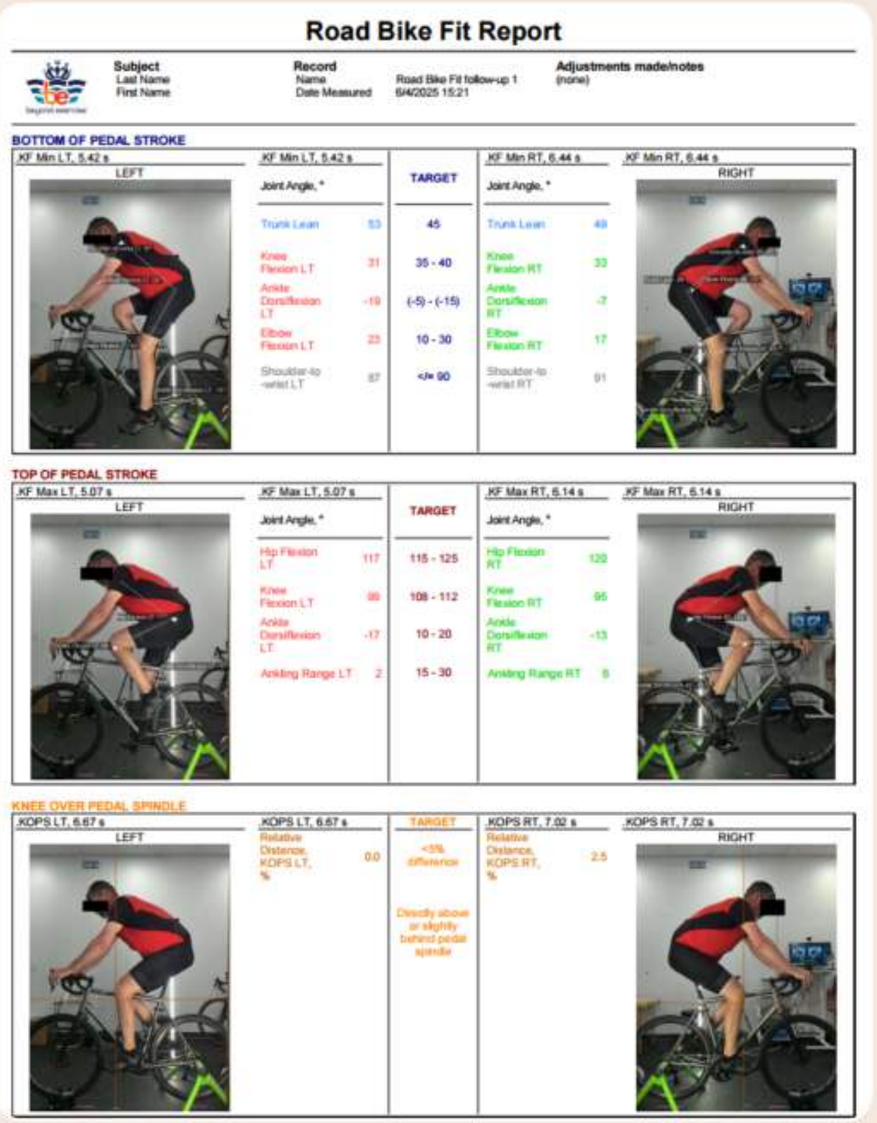
When It Happens	What It Suggests
Builds during ride, fades after	Fit issue
Lingers off the bike	Body issue
Only on climbs or sprints	Strength/endurance limit
Tingling or numbness	Pressure / contact point

Keep the Bike and the Body Tuned

- Reassess fit after major gear or mileage changes
- Maintain hip, spine, and foot mobility
- Build postural and core endurance
- Address issues early — not after they sideline you

Bike Fitting Service





Road Bike Fit Report

Subject		Record		Adjustments made/notes
Last Name		Name	Road Bike Fit follow-up 1	(none)
First Name		Date Measured	6/4/2025 15:21	

BOTTOM OF PEDAL STROKE

KF Min LT, 5.42 s — LEFT

KF Min LT, 5.42 s — Joint Angle, °		TARGET	KF Min RT, 6.44 s — Joint Angle, °	
Trunk Lean	53	45	Trunk Lean	49
Knee Flexion LT	31	35 - 40	Knee Flexion RT	33
Ankle Dorsiflexion LT	-19	(-5) - (-15)	Ankle Dorsiflexion RT	-7
Elbow Flexion LT	23	10 - 30	Elbow Flexion RT	17
Shoulder-to-wrist LT	87	</= 90	Shoulder-to-wrist RT	91

KF Min RT, 6.44 s — RIGHT

TOP OF PEDAL STROKE

KF Max LT, 5.07 s — LEFT

KF Max LT, 5.07 s — Joint Angle, °		TARGET	KF Max RT, 6.14 s — Joint Angle, °	
Hip Flexion LT	117	115 - 125	Hip Flexion RT	120
Knee Flexion LT	99	108 - 112	Knee Flexion RT	95
Ankle Dorsiflexion LT	-17	10 - 20	Ankle Dorsiflexion RT	-13
Ankling Range LT	2	15 - 30	Ankling Range RT	8

KF Max RT, 6.14 s — RIGHT

KNEE OVER PEDAL SPINDLE

KOPS LT, 6.67 s — LEFT

KOPS LT, 6.67 s		TARGET	KOPS RT, 7.02 s	
Relative Distance, KOPS LT, %	0.0	<5% difference Directly above or slightly behind pedal spindle	Relative Distance, KOPS RT, %	2.5

KOPS RT, 7.02 s — RIGHT

Workshop Details

- Nov 22, 2:00pm @ **Beyond Exercise**
- 1-hour practical session on strength & mobility for cyclists
- Learn posture, hip, and core exercises from today's talk
- Great opportunity to apply what you've learned
- Check out the bike fitting studio

Contact

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