Clarity Health

The Gut–Muscle Axis

How your gut shapes muscle building, energy, and recovery, and what you can do about it.



What happens	How to support
Building muscle • A leaky gut lets LPS, a toxin made by unfriendly bacteria, into the blood [1]. • Your immune system reacts with inflammatory signals like TNF-alpha and IL-6 [1]. • Those signals switch on muscle breakdown and switch off mTOR, the muscle-building signal [1].	**Keep the gut lining tight so LPS stays out of the blood [1].** Fix dysbiosis (too few beneficial bacteria, too many unfriendly ones) and other causes of leaky gut. **With Clarity** Gut testing estimates how much LPS your bacteria may make. Your clinician builds a personal leaky gut protocol.
Fueling training • Beneficial gut bacteria turn fiber into short-chain fatty acids (SCFAs). SCFAs help muscle cells make energy [1]. • When antibiotics wiped out gut bacteria in mice, the mice had less endurance and less stored muscle fuel [2].	**Grow the beneficial bacteria that make SCFAs [1, 4].** Eat prebiotic fibers, like inulin and resistant starch, that feed SCFA-producing bacteria [7]. After antibiotics, use a targeted gut restoration protocol [2]. **With Clarity** The Advanced Gut Panel measures your SCFAs directly, plus your full gut microbiome. Your clinician uses both to build a personal restoration plan.
Recovering • Hard exercise pulls blood away from the gut and makes its lining leakier [1, 3]. • The inflammation that follows can speed up muscle breakdown [1].	**Strengthen your gut barrier so it holds up during long, hard sessions [1, 3].** Take in carbs during every session over 2 hours. In runners, this cut gut symptoms by about 60% in two weeks [6]. Skip ibuprofen before hard sessions [5]. **With Clarity** Gut testing checks your gut barrier and inflammation markers. Your clinician builds a plan to strengthen your barrier around your training load.

How Clarity helps you train harder and recover

Learn more at **getclarity.health/assessment**

1 Test
See who lives in your gut.

2 Plan
A clinician builds your personal plan.

3 Adapt
Retest every 6 months as you train.

The Gut–Muscle Axis: references

Numbers match the bracketed citations on page 1.

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