



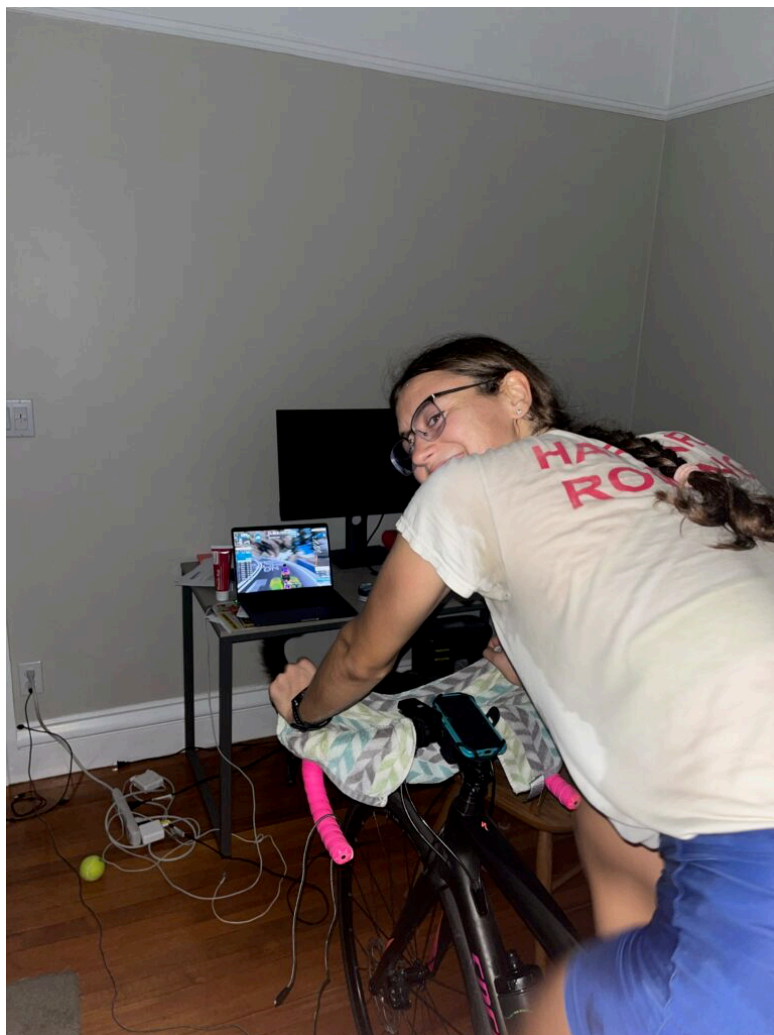
This newsletter is brought to you by a rainy days, curiosity, and a day on the trainer. If you enjoy it, I'd be grateful if you could share with one or two others!

JFK 50

The JFK 50 is the oldest ultra in the US (this was its 62nd year). It starts with ~15 miles on the Appalachian Trail and ends as a road race. It's really exciting to see athletes from all backgrounds (mountain, flatter trails, road) come together at this race. It shows how strengths from each background can translate over. For example, the men's winner, David Sinclair, is notoriously strong in mountain races: he won Broken Arrow Skyrace and Speedgoat 50k (both very steep races) earlier this year. Then he ran this relatively flat race extremely fast (5:08, a new course record). Rachel Drake, an anesthesiology resident, also set a new course record in the women's race.

P.S. It's also worth checking out the [replay](#) of the men's NCAA cross-country championship race: Habtom Samuel (a sophomore at New Mexico) had his shoe fall off at 5k but pushed through to finish in second place. He also has won a 10k championship race after falling on the track during the race. Always keep going! It was nice to see the camaraderie and celebration at the end between Habtom and Graham Blanks, the winner for the past two years.

P.P.S. [Quad Dipsea](#) is this weekend! Another famous, old trail race, this one is two laps of the Dipsea trail in San Francisco, traversing from Mill Valley to Stinson Beach and back (28 miles, 9200 ft of elevation gain).



vEveresting Report

"The traffic lights three stories below me switched red to yellow to green to red to yellow to green in the corner of my eye. I thought about how many times that day they would switch, how many cars and people, all doing different things, on different missions, would pass through that intersection. Around halfway up each climb the virtual Alpe would get snowy and I'd think about the snowy, very exciting Bengals-Steelers game that I'd watched until way too late the night before. No music, just the whirr of the trainer, the power numbers, and these thoughts..."

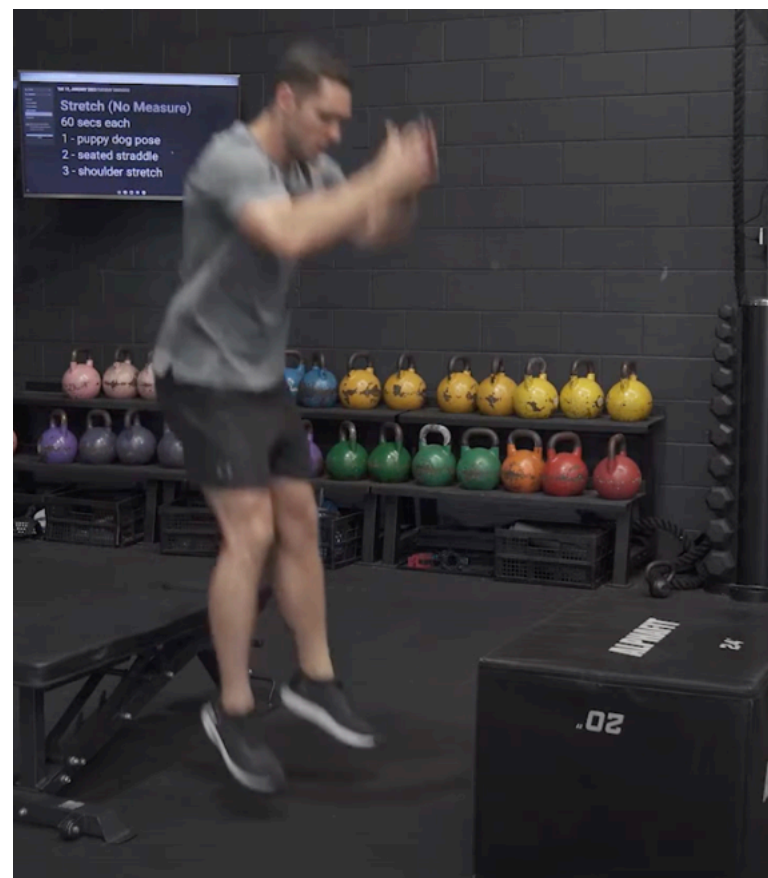
[Full report here!](#)

Coaching snapshot: plyometrics!

Question: Should I be including plyometrics in my marathon training?

Though they are more often associated with sprint training (sprints are basically high-intensity plyometrics), plyometrics are an important tool for any runner. Several randomized controlled trials have shown the benefits for endurance runners: adding plyometrics once a week [improved 5k time trial performance](#) by 2% over 8 weeks; adding it twice a week [improved 2.4k time trial performance](#) by almost 4% over 6 weeks in competitive athletes. I'd recommend making sure you're already doing strength training and strides without injury before adding plyometrics, however, and there is some [debate](#) as to their benefit over heavy resistance training.

Plyometrics are activities characterized by a lengthening movement followed by a shortening movement, e.g. landing from a jump (lengthening muscles and tendons) then springing back (shortening muscles and tendons). Think of this cycle like a spring: when you land from a jump, the muscles/tendons absorb energy and store it as elastic potential energy, which can then be harnessed into kinetic energy that helps bounce you back up. Accordingly, plyometric exercises have [three phases](#): the pre-stretch (eccentric) phase (basically, the landing), the amortization phase (when you've stopped moving/are switching directions), and the shortening (concentric) phase (basically, the next explosive movement).



Depth box jump. See the full video by Swift Movement Academy [here](#).

The classic example is a [depth box jump](#). If you try this yourself, I'd recommend starting just with the first half of the movement (just the step off onto the ground) to make sure you're landing in a good, stable, explosive position before advancing to add the push-off. Start with low intensity (a platform closer to the ground) before advancing height. Start with low reps, two legs... you get the point: be careful!

So, what are the mechanisms responsible for performance improvements with plyometric training? Well, [there are a lot](#), including increased tendon stiffness, increased muscle strength, and [more excitable muscle spindles](#) (responsible for exciting neurons for power production when a muscle senses stretching). The combination of improved energy storage and release with stronger muscles leads to faster, more economical running!

Alright, that seems like enough for now. What questions do you have about training and racing? Reply to this newsletter or [email me](#), and I'll answer one next week!

Let your friends know that I'm taking more athletes! I'm looking to work with runners and triathletes and depend on you to help spread the word :) Send them to my [website](#) to submit an inquiry or just pass along my email. Thank you so so much!



Pumpkin cake!

This recipe is light on the oil, heavy on the pumpkin, perfectly sweet, and deliciously soft.

Ingredients: 70g canola oil, 200g granulated sugar, 30g molasses, 2 eggs, 425g (one 15oz can) pumpkin puree, 80g milk, dashes of cinnamon, nutmeg, ginger, salt, and allspice, 250g all purpose flour, and 1 tsp baking soda. (Optional to add: pecan crumble.)

Mix together all ingredients in the order listed above. Pour half into buttered pan. Spread optional crumble (see link below). Pour in remaining batter. Bake at 375F for 30-40 minutes. Enjoy!

[Crumble recipe here!](#)

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