

THE **CrossFit** JOURNAL

THE SUGARY ALBATROSS

The “energy balance” is a myth.
You can’t outwork a bad diet.

BY BRITTNEY SALINE



Jason Mathews almost lost his pull-up.

Though Mathews has trained at CrossFit Armoury for the past three years, a desk job in sales convenience trumped cleanliness when it came to nutrition, and his 30 unbroken pull-ups soon dwindled to less than a handful.

“Now to get one or two (pull-ups) in a row is tough,” he said.

Despite his commitment to training, a diet dotted with pastries and ice cream—a Dairy Queen is just down the road from the gym—has held him steady at nearly 30 percent body fat.

“I know it’s horrible for me,” he said. “I’ll always (plan to) start eating healthy again tomorrow . . . but there’s not enough tomorrows to make up for the amount of bad I’m doing to myself.”

Though Mathews reports that 75 percent of his diet is clean, “Just one or two (sugary) meals seems to sabotage me,” he said. “It doesn’t matter how many times I work out. It seems like those calories are a lot harder to push out.”

The soda industry would have you believe otherwise.

Where We’ve Gone Wrong

“While both inherited and environmental factors play a role in how much we weigh, and the causes of today’s obesity epidemic are complex, weight gain fundamentally results from an excess of calories consumed vs. calories expended,” claims [CokeSolutions](#), a Coca-Cola Co. platform that aims to help customers “attract business, boost sales and enhance your operations.”

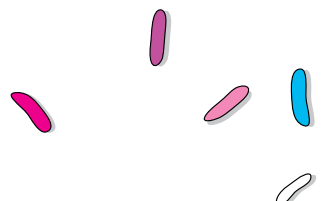
Citing the importance of calorie totals in foods—making no mention of the source or quality of those calories—The Beverage Institute for Health and Wellness, an arm of the The Coca-Cola Co., [asserts](#) that “understanding energy balance is key to maintaining a healthy weight This includes understanding individual caloric needs and the role of regular physical activity in regulating body weight and maintaining overall good health.”

It hasn’t been that simple for Jennifer Lemmen. The 40-year-old has spent the past three years training at CrossFit Wildlife, diligently working to shed the 85 lb. she gained after she quit smoking in 2004. Though she trains four to five days per week, it hasn’t been enough to counter decades-old nutrition habits.

If you want to know how much rowing cancels out a plate of doughnuts, here’s a better question: What if you didn’t eat the doughnuts in the first place?



Mike Warkentin/CrossFit Journal



Though Jennifer Lemmen trains four to five days per week, it hasn't been enough to counter decades-old nutrition habits.

"Sugar seems to be a big demon for me," she said. "It was definitely the sweet treats that got me."

Before CrossFit, Lemmen followed Weight Watchers. The program's points system was simple and allowed her to keep eating the sweets she craved, including the program's packaged cookies and snacks "that are kind of low fat and low salt and (labeled as) good for you," she said. "It didn't matter what you ate as long as you got your number of points per day."

After losing—and regaining—50 lb. with the program, Lemmen started CrossFit in 2013. Figuring that exercise was the missing ingredient, she continued to use the Weight Watchers model for her 2,000-calorie-per-day diet, with most of those calories coming from processed carbohydrates such as breakfast sandwiches, Chinese take-out and ice cream.

"When I started it was like, 'Well, if I just continue eating the way that I have been and I add exercise, I'll lose weight,'" she said.

It worked for a short while. After a few weeks of CrossFit she could run 600 m without getting winded, and she dropped 10 lb. in the first six months. At the one-year mark, she deadlifted 230 lb.

"I remember being so happy I jumped up and down and almost started crying," she said.

But after a year, her progress slowed. The scale stopped moving and the PRs stopped raining, and though many of her peers have since moved from banded to unassisted pull-ups, Lemmen is 5 ft. 9 and 275 lb., so she substitutes ring rows whenever pull-ups appear. Even her lifts—the aspect of CrossFit she excels at most—stopped improving.

"Because I've got extra weight on my frame, it means I'm not gonna have as much on the bar," she said.

Brent Price can empathize.



As silly as it looks to eat a doughnut while training, some people will think nothing of eating poorly before or after training.

When the 32-year-old started training at CrossFit Vancouver in 2011, he weighed almost 300 lb. at 6 ft. Though he lost 35 lb. in his first six months of CrossFit without changing anything else about his lifestyle, he said that it wasn't until he began cutting sugar, alcohol and processed foods from his diet more than two years later that he made lasting, significant progress in his fitness.

"Even after I added CrossFit and I started being active, getting over that hurdle of being able to change my diet was really hard," he said. "I felt really heavy and I felt really slow even though I had definitely made huge gains within CrossFit. I wasn't at my full capacity."

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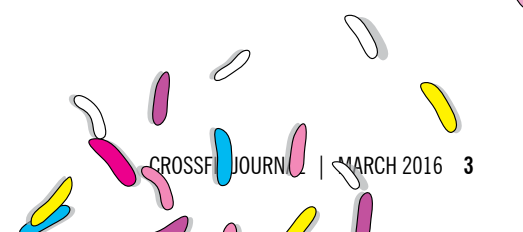
As a kid, Price went to school with bottles of Fanta and Sprite in his backpack instead of water.

"I was kinda brought up thinking that that was how you hydrate yourself," he said.

He continued the habit into adulthood—now adding rum to his Coke—and lived off french fries, pizza, poutine and ice cream. The final blow was dealt at the 2011 Coachella Valley Music and Arts Festival, when he missed The Dead Weather—his favorite band—because he couldn't cross the festival grounds beneath the blistering California sun in time for the set.

"I kept having to take breaks, and I was out of breath and hot," he said. "It was a really terrible experience, and I was really defeated ... I came back after that and just went straight into CrossFit Vancouver."

Within six months, he'd lost 35 lb.—more than he'd ever lost at one time before. Though the scale slowed down after that, Price never thought twice about his diet.



"I felt like I was putting more time into exercise so I didn't need to put more time into food, so I ate a lot of processed foods and I was still on the sugar wagon," he said. "But I wouldn't really feel bad about it. I was like, 'Oh, I'm CrossFitting. I'm working out really hard. It doesn't matter.'"

By 2013, he began to suspect something was amiss. He could not do toes-to-bars or pull-ups—even assisted by a band—and "met-cons were still really hard," he said.

"For me, that was a kind of a visible wake-up call saying, 'I've been doing this long enough that I should have this by now. Where am I going wrong?' And that's when I really started to look at the amount of sugar and alcohol that I was intaking."

Balance's Bluff

"Energy balance describes the dynamic relationship between the energy an individual consumes (calories [IN]), the energy their body burns (calories [OUT]), and the storage of excess energy (calories) as body fat. When energy intake consistently exceed energy needs (calories [IN] > calories [OUT]), body fat increases. Conversely, when energy needs consistently exceed energy intake (calories [OUT] > calories [IN]), body fat decreases. When calories [IN] = calories [OUT], there is no change in body fat." —[The Beverage Institute for Health and Wellness](#).

Dr. David Ludwig, an endocrinologist at Boston Children's Hospital, disagrees.

"We generally think that weight gain is the unavoidable consequence of consuming too many calories, with fat cells being the passive recipients of that excess," he wrote in his 2016 book *"Always Hungry."* "But fat cells do nothing of consequence without specific instructions—certainly not calorie storage and release, their most critical functions."

The chief instructor? Insulin, Ludwig wrote.

"Insulin's effects on calorie storage are so potent that we can consider it the ultimate fat cell fertilizer," he wrote, describing a [study](#) in which rats given insulin infusions gained more weight than their counterpart control rats.

"Even when their food was restricted to that of the control animals, they still became fatter," Ludwig wrote. "If too much insulin drives fat cells to increase in size and number, what drives the pancreas to produce too much insulin? Carbohydrate, specifically sugar and the highly processed starches that quickly digest into sugar."



CrossFit, the whiteboard and nutrition: Consider exactly what you're putting into your body when you're evaluating what you get out of your body.

Wendy Nielsen

Along with a team of six other researchers, Ludwig conducted a similar study with human subjects, in which the researchers studied the effects of a 60, 40 and 10 percent carbohydrate diet—each containing the same number of calories—on 32 18-to-40-year-old men and women with body-mass indexes of 27 (obese) or higher over a seven-month period.

“We found that the participants burned about 325 calories a day more on the low-carbohydrate compared to the high-carbohydrate diet,” Ludwig reported. “The high-carbohydrate diet also had the worst effect on major heart disease risk factors, including insulin resistance, triglycerides, and HDL cholesterol. These results ... indicate that all calories are not alike to the body. The type of calories going into the body affects the number of calories going out.”

In other words:

“You cannot exercise away a bad diet,” CrossFit Founder and CEO Greg Glassman said during CrossFit’s “California Invasion: Rally To Fight Big Soda.”

Referencing the most basic presentation of CrossFit’s diet prescription, he added: “The meat and vegetables, nuts and seeds, some fruit, little starch, no sugar component is critical.”

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—Greg Glassman

The Fruits of Their Labor

Today, Lemmen is working on cutting sugar out of her diet. After seeing a former CrossFit Wildlife athlete who had since moved away and acquired a new, chiseled physique, Lemmen asked her “what the deal was.”

The athlete had been meeting with a nutritionist who did CrossFit and recommended a diet low in sugar and high in protein, and so in June,



Beth Black

When her training plateaued, Jennifer Lemmen addressed her diet. Improvements came shortly thereafter.

Lemmen met with the nutritionist, too. Within a month of following a diet of mostly vegetables, meat and no refined sugar, “My performance at the gym went up and I lost 10 pounds,” Lemmen reported.

In early 2014, Price also met with a CrossFitting nutritionist.

“We sat down and talked (about) what I was actually doing to myself by continuing to eat sugar and drink pop,” he said, recalling a discussion about the potential for developing Type 2 diabetes down the road. “When you are playing with your blood sugar to that extreme, after (learning) what that could do to you, it was easier for me to make the decision not to have it.”

He swapped sweet cereals for poached eggs in the morning and cut the soda and ice cream altogether. Within a week, he was sleeping better and training harder. He began tracking his macronutrients and doing weekly meal prep.



Lysien Leano

In 2011, Brent Price weighed close to 300 lb. Through fitness and nutrition, he’s dropped that number to about 200 lb.

“It created this environment of the entire day (being) dedicated to health instead of just the hour you spend at the gym,” he said.

Today, two years after quitting the sweet stuff, Price (who now trains at Studeo 55 CrossFit) weighs around 200 lb. and recently PR’d his snatch at 190 lb., a 55-lb. improvement from his sugar-laden days.

“One of the things that instantly went up was my snatch because I was able to move faster,” he reported.

He can also comfortably string muscle-ups together in sets of 10, and last April, he was able to run from stage to stage at Coachella, bare-chested and bursting with self-confidence.

“It was a big day for me to walk in there,” he recalled. “It made me really realize the difference in what a healthy lifestyle can make in everything that you do.” ■

About the Author: Brittney Saline contributes to the CrossFit Journal and the CrossFit Games website, and she trains at CrossFit St. Paul. To contact her, visit brittneysaline.com.