Friday Favorites: Exercise Before or After Meals for More Weight Loss and Better Blood Sugar Control Transcript

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Fasted Exercise and Fat Metabolism

A systematic review and meta-analysis on exercise timing for fat metabolism found that exercising in a completely fasted state may work best. The Japanese team that published some of the similar work in this area went as far as to assert, "If exercise were a pill to burn body fat, it would be effective only when taken before breakfast." Surveys show few people exercise before breakfast, though. Before asking people to make the switch, we need to make sure that these tantalizing 24-hour results translate into weight loss over the long term. There's a solid theoretical basis, but you don't know until you put it to the test. In a study of experimental weight gain, volunteers were fed up to 4,500 calories a day for 6 weeks while vigorously exercising a total of 300 minutes a week, either always after an overnight fast or after a meal.

Weight Gain and Weight Loss Studies

A control group who didn't exercise at all gained about 6 and 1/2 lb compared to 3 lb in the exercise after meal group. The pre-meal exercise group worked out the same amount, but only gained about half as much, 1 and 3/4 lb. What about weight loss, though? 20 young women were randomized into 3 hours a week of before or after meal exercise. Same diet, same amount of exercise, and disappointingly, about the same amount of weight loss. The pre-meal exercise group did lose about an extra pound of body fat, though. Total weight loss 3.5 lb versus 2.2 lb, but this did not reach statistical significance, meaning uh such a small difference could very well have been due to chance.

A study of 6 weeks of low-volume, high-intensity interval training before or after meal similarly failed to show a difference. One explanation that's been offered for this failure is that the increased fat loss during pre-meal exercise might be neutralized by the lesser diet-induced thermogenesis. In other words, because it costs our body fewer calories to process food if we eat after compared to before physical activity. When we exercise after a meal, our body gets mixed signals. I mean, exercise is all about mobilizing energy stores for fuel, whereas eating is more about assimilation and storage.

Why Pre-Meal Fat Loss May Not Show Up

And the metabolic challenge presented by the ensuing hormonal tug-of-war might be responsible for the 15 to 40% greater calorie cost. This has led some to recommend exercising after meals to facilitate weight loss. If you do the math, though, our body is so efficient at digesting that the 15 to 40% increase might only come out to 3 to 12 calories. Such a slight difference would be easily overwhelmed by the huge disparity in fat loss as confirmed by the 24-hour fat balance study showing up to 500 calories of fat burning difference.

I would suggest a more reasonable explanation might be that the clear body fat deficit on pre-meal exercise days is made up for by extra fat storage on non-exercise days. Your body likes to hold on to extra body fat if it can, and so on days you're not driving it down, it may try to even things out. Both of the failed weight loss studies had people exercise only 3 days a week, and so their bodies said most of the week to compensate. The study I'd like to see is a pre-meal versus post-meal exercise on all or at least most days of the week to see if we can continue to drive down fat stores.

For those with diabetes, though, you'd want to do the opposite.

Exercise Timing for Blood Sugar Control

You can imagine how that siphoning effect muscles have on excess blood sugar during exercise might be great for those suffering from elevated blood sugars. And indeed, exercising after a meal can bring down blood sugars as

well as some blood sugar lowering drugs. Randomized type 2 diabetics to a 20-minute leisurely stroll about 2 miles an hour before dinner versus after dinner, and the after dinner group blunted their blood sugar spike 30%. Same meal, same amount of exercise, but a significant effect on blood sugar control thanks to a little tactical timing. Even just a 10-minute walk after a meal may make a difference. So, for those with blood sugar problems, it's better to exercise after meals than before them.

Blood sugar from a meal starts appearing in the bloodstream 15 to 20 minutes after the first bite and is ramping up by 30 minutes to peak at around the 1-hour mark before declining to pre-meal levels within a few hours. So, for optimal blood sugar control, pre-diabetics and diabetics should start exercising 30 minutes after the start of a meal and ideally go for an hour to completely straddle the blood sugar peak.

If you had to choose a single meal to exercise after, it would be dinner due to the circadian rhythm of blood sugar control that wanes throughout the day.

Ideally then, breakfast would be the largest meal of the day and you'd exercise after that or exercise after every meal.