

The Optimal Weight-Loss Diet

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APPETITE SUPPRESSION

Ch-Ch-Ch-Chia

1. Chia has been eaten for thousands of years, which suggests it's at least safe to consume, but does it have any special benefits?. p 306:1.
2. It's certainly nutritious, providing a good source of fiber, plant protein, niacin, minerals, and antioxidants—black Chia seeds perhaps more so than white—but that could describe a whole host of the whole plant foods. p 306:1.
3. In 2017, a research team in Turkey published a study investigating what happens if 2 or 3 teaspoons of Chia seeds are added to a yogurt snack. After eating yogurt with Chia, participants reported significantly less hunger compared to those who had had plain yogurt, which then translated into eating fewer calories a couple of hours later at lunch. p 306:3.
4. Two teaspoons of Chia seeds, which have around 35 calories, seemed to work as well as three teaspoons. The yogurt and Chia subjects however, ended up eating nearly 300 fewer calories at lunch, so in effect the Chia could be thought as having negative calories. p 306:4-307:0.

Just the Flax, Ma'am

5. Like Chia seeds, flaxseeds have been shown to cause appetite suppression, perhaps in part due to their large soluble fiber content, but does this translate into weight loss? p 308:1.
6. Over a 12 week study the control group who had gotten lifestyle advice lost nearly 7 pounds and about an inch off their waists, while the group who it gotten the same advice along with spoonfuls of flaxseeds a day lost more than 20 pounds on average and nearly 4 inches off their waists despite being given, in effect, more food to eat. p 308:2.
7. Another study pitted flax seeds against nonalcoholic fatty liver disease. The flaxseed group was instructed to mix their daily ounce or so of ground flax seeds with water or juice and to drink it after breakfast. p 308:2 & 4.
8. Body weight dropped in both groups, along with liver fat, inflammation, and scarring, but significantly more so in the flaxseed group. Again approximately 20 pounds were lost in three months after telling people to add something to their diets. p 308:4.
9. There was a significant reduction in body weight, BMI and waist circumference following flaxseed supplementation. p 309:0.

What About the Cyanide?

10. As many as one in five of the plants we eat produces cyanide. In fact if you look at the major food crops in the world more than half are cyanogenic, meaning

cyanide-producing.. p 309:3.

11. Unlike toxins such as lead, mercury, and arsenic, which are chemical elements that can't be broken down, cyanide is an organic molecule made up of one carbon atom attached to one nitrogen atom. p 309:3.
12. In that configuration, the molecule is indeed potentially poisonous, but it can instantly lose its toxicity when it's broken down or complexed into something else. p 309:3.
13. That's the reason we have a cyanide-detoxifying enzyme in our body that does just that. p 309:3
14. Cyanide is a common defense used by plants to fend off herbivores so our bodies have not one but five different ways to get rid of it. p 309:3 - 310:0.
15. Our bodies were made to be cyanide-detoxifying machines, but there's obviously a limit. p 310:1.
16. Researchers put flax seeds to the test to see what kind of cyanide exposure you might get from eating them. p 310:4.
17. The range of cyanide blood levels one could estimate to possibly be associated with clinical symptoms of intoxication might be around 20 to 40 micromoles. p 311:1.
18. 4 ½ tablespoons of the highest cyanide containing ultra ground raw flax seed eaten on an empty stomach only raised average cyanide blood levels to 6 micromoles before rapidly coming back down, with the highest individual reading coming in at under 14. p 311:1.
19. Nine tablespoons shot blood levels write up to 20 micromoles, and 15 tablespoons, practically a whole cup, put the study subject in the potential toxicity zone for more than three hours. p 311:2.
20. Yet even in that worst case scenario of one cup of ultra ground raw flax seeds at the highest available cyanide concentration on an empty stomach, there still were no actual symptoms of toxicity. p 311:2.

Cumin

21. Used in cuisines around the world from Tex-Mex to South Asian, cumin is the second most popular spice on earth after black pepper. p 311:3.
22. Overweight women were randomized to eat calorie restricted weight loss diets with or without a teaspoon of added cumin in a day, half a teaspoon at both lunch and dinner. p 312:2.
23. Over the three month study, those in the cumin group lost about four more pounds and nearly an inch off their wastes, in addition to significantly dropping their triglycerides and cholesterol. p 312:2.

Black Cumin

24. Black cumin and is not actually related to cumin; it's a member of the buttercup rather than the carrot family. p 312:3.
25. Also known as *Nigella sativa* or simply black seed, it's

a common spice whose peppery flavor is popular in Indian and Middle Eastern cuisines, but it's also been prized for purported medicinal benefits. p 312:3.

26. Described as a miracle herb, with mentions going back to the Old Testament, Isaiah 28:25, 27, black cumin was found in King Tut's tomb and the Prophet Mohammed evidently is quoted as saying it could heal every disease except death. p 312:3.
27. Daily black cumin consumption significantly improves cholesterol, triglycerides, blood pressure, and blood sugar control. p 312:5.
28. One study found that menopausal women randomized to a gram a day, less than a quarter teaspoon, of black cumin powder reduced their bad LDL-cholesterol by 27% within two months. p 312:5.
29. That's the kind of result you'd expect taking a statin drug, but it was achieved with just a sprinkle of a spice. Black cumin may also help with menopausal symptoms themselves. p 313:0
30. Now, taking black cumin and didn't cure anything – a month after stopping the spice, cholesterol levels crept back up– but it does appear to be a cheap, effective, and tasty treatment for some of our deadliest risk factors. And the side effects? Loss of appetite and weight loss. Bingo! p 313:1.
31. A quarter teaspoon of black cumin powder every day appears to reduce body mass index within a span of a couple of months. p 313:2.

Saffron

32. Saffron is another spice found to be effective for treating a major cause of suffering–depression in this case–with a side effect of diminished appetite. p 313:3.
33. Saffron was found to lead to significant weight loss: 5 pounds more than placebo and nearly an inch off the waste in eight weeks. p 313:3.
35. The dose of saffron used in the study was the equivalent of drinking a cup of tea made from of large pinch of saffron threads. p 313:3.
36. Suspecting the active ingredient to be crocin, the pigment in saffron that accounts for its crimson color, researchers also tried giving people just the purified pigment. p 313:4.
37. That also lead to weight loss, beating the placebo by 2 pounds and half an inch off the waist, but it didn't do as well as the full saffron extract. p 313:4.
38. The mechanism appeared to be appetite suppression, as the pigment group ended up averaging about 85 fewer calories a day, while the saffron group consumed 170 fewer calories on average. p 313:4.
39. A similar study looked at snacking frequency. Eight weeks of saffron extract did cut snack intake in half compared to placebo and was accompanied by a slight but statistically significant weight loss, about 2 pounds. p 313:5.
40. The problem is that saffron is the most expensive spice in the world. It is composed of delicate threads poking out of the saffron crocus. Each flower produces only a few threads, such that you need 50,000 flowers–

enough flowers to fill a football field—to make a single pound of spice, so that pinch of saffron could cost up to a dollar a day. p 314:1.

CHRONOBIOLOGY

Is Breakfast Really the Most Important Meal of the Day?

41. Chronobiology is the study of how our bodies natural cycles—mental, physical, and emotional—are affected by the rhythms of the sun, moon, and seasons. p 314:3.
42. It is widely touted that breakfast is not only the most important meal of the day in general but specifically in relation to weight loss. p 314:3.
43. This is not just a pop culture prescription from check out aisle magazines but an idea put forward by such prestigious institutions as Johns Hopkins and NYU. p 314:3.
44. Studies have shown that obesity and skipping breakfast tend to go together beyond a shadow of a doubt, in fact, gratuitously so. p 315:1.
45. It turns out eating breakfast doesn't seem to affect our metabolic rates, nor does it sufficiently suppress our appetites. p 316:0.

Breakfast of Champions?

46. Researchers at Columbia University randomized individuals into one of three breakfast conditions: oatmeal made from quick oats, the same number of calories of Frosted Flakes, or just plain water. Then they measured how many calories people took in at lunch three hours later. p 316:2.
47. Not only did those who ate the oatmeal feel significantly fuller and less hungry, some then went on to consume significantly less at lunch. Overweight participants who had eaten oatmeal for breakfast consumed less than half as many calories at lunch, about 400 fewer calories, which is more than oatmeal itself contained. p 316:2.
48. So in effect, the oatmeal provided negative calories. In contrast, the Frosted Flakes was so unsatiating that the cereal group ate as much at lunch as the breakfast skipping, water only group. It's as if the cereal group hadn't eaten breakfast at all! p 316:2 - 317:0.
49. Children's breakfast cereals are the worst. They have been found to contain 85% more sugar, 65% less fiber, and 60% more sodium than those marketed to adults. p 317:3.
50. A characteristic of so-called ultra processed food is this necessity to pack them full of salt, sugar, flavorings, and the like since they have their natural intrinsic flavors processed out and you have to mask any unpleasant taste introduced during manufacturing. p 318:0.
51. Most randomized controlled studies of skipping breakfast found no weight loss benefit. As it turns out, it's not just what we eat but *when* we eat. Because of our circadian rhythms, morning calories don't appear to count as much as evening calories? p 319:2 & 4.