

START WITH HEART

Want a diet that's likely to lower your heart disease risk over the next 10 years by 20 to 30 percent?

The OmniHeart Trial tested three variations of a vegetable-and-fruit-rich diet in people who had pre-hypertension or hypertension—that is, anyone with blood pressure above 120 over 80.¹

Not in that group? Odds are you will be. Middle-aged Americans have a 90 percent chance of developing high blood pressure at some point in their lives.

The diets were remarkably effective. After six weeks, they had:

■ **Lowered systolic blood pressure by 13 to 16 points** in people with hypertension (systolic blood pressure—the higher number—over 140). Blood pressure fell by 8 points in people who had pre-hypertension (systolic pressure between 120 and 139).

“The diets lower blood pressure more than most drugs,” says Frank Sacks, a cardiologist at the Harvard School of Public Health and one of OmniHeart's principal investigators.

■ **Lowered LDL (“bad”) cholesterol by 20 to 24 points** in people with high cholesterol. LDL fell by 5 points in people whose levels weren't high when the study started (they had LDL below 130). That's not quite what you'd get from a prescription statin drug like Lipitor (a drop of 50 to 100 points), but it's no small potatoes.

The tricky part is summing up an entire diet in simple, easy-to-remember advice. Here's our try.

■ **Lowered damaging triglycerides by 9 to 16 points.** Two of the three OmniHeart diets lowered triglycerides. The higher-carb version, which had more sugar, didn't.

What made the OmniHeart diets so potent? It wasn't just the low levels of saturated and trans fat (7 percent of calories), sodium (2,300 milligrams a day), and added sugar (2 to 5 teaspoons a day). It was also the high levels of potassium (4,700 mg a day), magnesium (500 mg), calcium (1,200 mg), and fiber (30 grams) in the diets.

Which of those nutrients mattered? “The study wasn't designed to say,” says Sacks.

AND THE WINNER IS...

Each of OmniHeart's three diets was higher in one of the following:

■ **carbs** (mostly from foods containing a total of 5 teaspoons of sugar a day),

■ **protein** (more than half from beans, nuts, seeds, tofu, and other non-animal sources), or

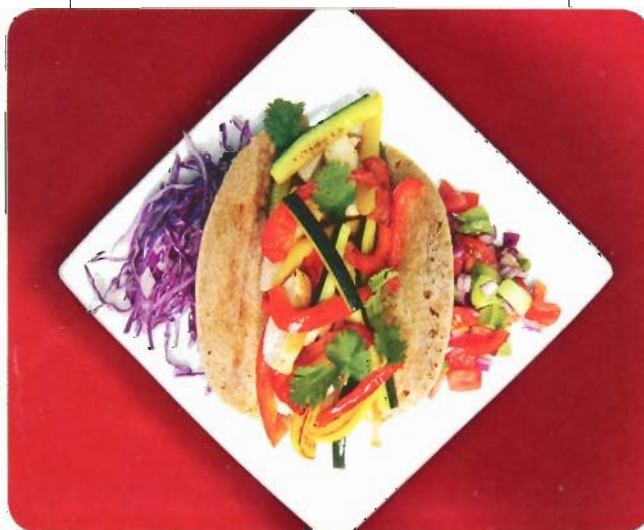
■ **unsaturated fat** (mostly from canola and olive oil).

The results: a tie between the diets higher in protein and unsaturated fat.

“We think that the health benefits of the protein and unsaturated fat diets are about the same, and that both are a little better than the carb diet,” says Sacks. “Although the protein diet lowered triglycerides better than the unsaturated fat diet, it also lowered HDL.” That's a minus—HDL is the “good” cholesterol.

Further analyses showed that the protein diet was especially good at lowering Apo B (a key component of LDL cholesterol) and Apo C-III (a key component of triglycerides).²

“In a couple of years we may be giving much more weight to data on Apo B and especially Apo C-III,” says Sacks. “Also, research on how to interpret changes in HDL is in a state of rapid development.”



Easy Fajitas. Chicken, yes. Tortilla, yes. But mostly veggies. (See p. 7 for recipe.)











A DAY'S WORTH OF FOOD

Here's a snapshot of what's in the OmniHeart diet and examples of what makes a serving. If it seems skimpy, relax. The diet is designed for someone who eats 2,000 calories a day. If you eat more, just up the servings proportionately.

- What about the pizza, tiramisu, gourmet ice cream, and

other foods that aren't here? Okay, so maybe you won't follow the diet every single meal. Think of it as an ideal. • And what if you don't want to measure out each portion of every food you eat? If you just get used to filling at least half of your plate with fruits and vegetables, that alone would be a success.

FOOD	NUMBER OF SERVINGS				TIPS
<p>VEGETABLES & FRUIT 11 servings per day</p> <p>1 serving ½ cup cooked vegetables ½ cup raw vegetables 1 cup salad greens 1 piece of fruit ½ cup fresh fruit ¼ cup dried fruit</p>					<p>TRY: A main dish (4-cup) salad for lunch is 4 servings. Two cups of stir-fried veggies for dinner is another 4 servings. Add 3 pieces of fruit at breakfast and as snacks, and you've got 11 servings. (See p. 7 for veggie-centric main dish recipes.)</p>
<p>GRAINS 4 servings per day</p> <p>1 serving 1 slice of bread ½ cup cereal, pasta, or rice</p>					<p>TRY: Half a cup of cereal with breakfast plus 2 slices of bread with lunch and ½ cup of rice or pasta with dinner adds up to 4 servings. Choose whole grains whenever possible.</p>
<p>LOW-FAT DAIRY 2 servings per day</p> <p>1 serving 1 cup milk or yogurt 1½ oz. cheese</p>					<p>TRY: If you have ½ cup of milk with cereal for breakfast and 6 oz. of plain yogurt for lunch or a snack, that leaves 1 oz. of cheese for salad or vegetables. (Try lower-fat cheeses from Cabot Creamery and Jarlsberg.)</p>
<p>LEGUMES & NUTS 2 servings per day</p> <p>1 serving ¼ cup nuts ½ cup cooked beans</p>					<p>TRY: You can have ½ cup of beans on salad or with dinner and ¼ cup of nuts on cereal, salad, grains, or as a snack. That comes to 2 servings.</p>
<p>POULTRY, FISH, & MEAT 1 serving per day</p> <p>1 serving ¼ lb. cooked</p>					<p>TRY: Start with 6 oz. of raw poultry, fish, or lean meat to get 4 oz. (¼ lb.) cooked. That's about the size of a deck of cards. (It's okay to eat more than 4 oz. of fish.) If you eat veggie burgers, etc., watch the salt.</p>
<p>DESSERTS & SWEETS 2 servings per day</p> <p>1 serving 1 small cookie 1 tsp. sugar</p>					<p>TRY: Count each Oreo-sized cookie as about 1 tsp. of sugar (1 serving). Many breakfast cereals have 1 to 2 tsp. of sugar. Note: A 6 oz. "fruit" yogurt or ½ cup of ice cream has 4 or 5 tsp. of added sugar.</p>
<p>OILS & FATS 2 servings per day</p> <p>1 serving 1 Tbs. oil 1 Tbs. margarine or mayo</p>					<p>TRY: Use 1 Tbs. to sauté vegetables and 1 Tbs. in your salad dressing (2 Tbs. of dressing usually contain 1 Tbs. of oil).</p>
<p>WILD CARD 1 serving per day</p>					<p>TRY: About 120 calories' worth of any category above.</p>

The bottom line: it's just too early to choose among the two diets. "At this point, I would award an approximate tie," says Sacks. "The idea is to encourage flexibility in using unsaturated fat and protein to replace carbs."

That's what's behind the diet we've come up with. It's a mix of the two best OmniHeart diets (protein and unsaturated fat), with a "wild card"—for those who can't resist—to eat more carbs.

Here's how it works:

■ **Start with unsaturated fat.** We began with the OmniHeart's (Mediterranean-style) unsaturated-fat diet, which contains 4 tablespoons of oil per day. We kept 2 of them for salad dressing and for oil to sauté vegetables.

■ **Add protein.** We traded the third tablespoon of oil for an extra serving of protein from beans (½ cup) or nuts (¼ cup), to get some of the benefits of the higher-protein diet.

■ **Add a wild card.** We left the fourth tablespoon of oil as a wild card. You could use it to:

- sauté vegetables or dress salad,
- swap for an extra 2 or 3 oz. of poultry,
- swap for an extra serving of grain, or
- swap for sugar (in your cereal, sweetened yogurt, or a small cookie).

Each tablespoon of oil has 120 calories, so you can't use your wild card on a fudge brownie sundae or a burrito.

(See p. 4 for *how many* servings of *what* you can have on the diet, and p. 7 for recipes to help get you there.)

WATCH YOUR WEIGHT

Got a spare tire that you'd like to lose?

The OmniHeart diets weren't designed to melt pounds, even though many of the participants were overweight or obese.

"In fact, we made sure they didn't cut calories or we wouldn't have known how much each diet mattered," says Janis Swain, an OmniHeart dietitian at Brigham and Women's Hospital in Boston.

In a separate study, Sacks put 800 overweight adults on diets that were high



Citrus Salad. Still hungry? Vegetables and fruits are "free foods." (See p. 7 for recipe.)

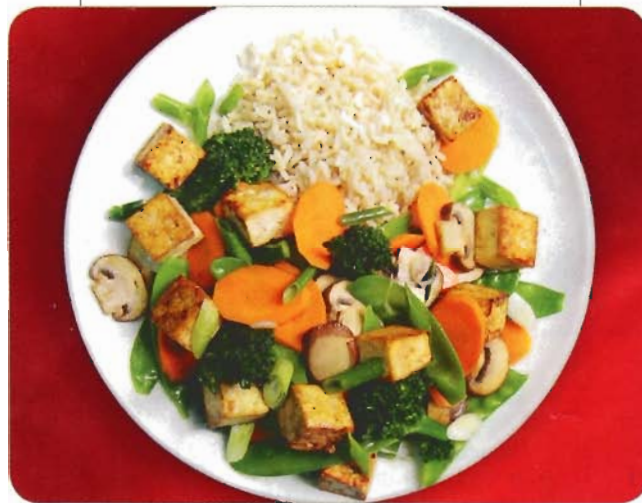
or low in fat, carbs, or protein. After two years, weight loss was about the same.³ "So there is also a tie for weight loss," he notes.

However, we've tweaked the diet to make it easier for people to lose—or not gain—weight by cutting caloric beverages and eating foods that are less calorie dense.

But those are details. Here's the big picture of what to eat.

RULES OF THE ROAD

1. Make vegetables a main course. It's clear from "A Day's Worth of Food" (p. 4) that vegetables or fruit are going to fill up at least half of your plate at lunch and dinner.



Stir-fry. Asian doesn't have to mean General Tso's chicken and fried rice. (See p. 7 for recipe.)

It's easy to polish off 3 or 4 pieces of fruit as snacks or with breakfast or lunch. But when you're shooting for 6 to 8 servings of vegetables a day, it makes sense to make them part of a main dish like stir-fried vegetables, vegetable curry, vegetable fajitas, or a main-dish salad—all of which can have chunks of chicken, fish, lean meat, or tofu mixed in. (For recipes, see "Veggie Good," p. 7.)

It's not just that you need to boost the vegetables, but that by eating more of them, you're eating less of other foods.

Used to having chicken or meat as your main dish for dinner? No problem. Just make sure that it's the size of a deck of cards, and surround it with enough side dish vegetables or salad to reach your total.

2. Keep saturated fat and cholesterol low. That means just a small (¼ lb.) portion of lean meat or poultry per day for a 2,000-calorie diet. (It's okay to have a more generous serving of fish.) Vegetarians can substitute veggie meats, tofu, or beans. Use eggs and non-low-fat cheeses sparingly. (Egg whites are okay.)

3. Don't overdo grains. Even whole grains are limited to four servings a day if you're shooting for 2,000 calories. And a serving is a thin (1 oz.) slice of bread, not a typical (4 oz.) bagel. Eat a small bowl of cereal for breakfast and a sandwich at lunch and you're left with just a half cup of cereal, rice, or pasta for dinner. A half cup isn't much—it's the volume of two golf balls.

4. Minimize added sugar. A 2,000-calorie diet allows two teaspoons (8 grams) of added sugar a day. There's no room for more empty calories. That's about what you'd get in many breakfast cereals, two small cookies, or ¼ cup of ice cream.

If you can't live without more sweets, swap your "wild card" for 120 calories' worth of dessert.

5. Keep a lid on sodium. In the OmniHeart study, sodium was limited to 2,300 milligrams a day. That means avoiding high-sodium processed foods.

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Drop the Density



Cut calorie density. Each dish has 60 calories, but the **Balsamic Berries (right)** are more filling than **traditional berries & cream.** To make Balsamic Berries, add 1 tsp. of sugar and 1 tsp. of balsamic vinegar to 1¼ cups of berries.

Source: *The Volumetrics Eating Plan* (HarperCollins, 2005).

6. Eat beans and nuts. “Of the three OmniHeart diets, the protein diet was the most challenging because it required so much bulk for the vegetable protein sources,” says Sacks.

In other words, people felt more full when they ate a diet rich in beans and nuts.⁴ That meant they might have shed some weight if the study had allowed them to cut calories.

If beans seem dull, think Middle Eastern (hummus), Indian (curried lentils), French (cassoulet), Southwestern (black bean soup), or American (vegetarian chili). Or just throw some chickpeas into your salad.

Nuts and seeds are easy to eat—too easy. If you can’t stop at ¼ cup, use them as a garnish on salad or cereal or veggies. Otherwise, the calories can add up quickly.

7. Eat real food, not junk. Notice what’s missing (or minimal) in this diet? It’s not just sweets (cookies, cakes, ice cream, muffins, soda, etc.). It’s also big bowls of pasta, big bagels, and big muffins. Most pizzas, panini sandwiches, wraps, and burritos are too big. Also gone are granola or energy bars, pita chips, and other junk disguised as health foods. Think of them as an occasional splurge.

8. Cut calorie density to lose weight. “People eat for weight or volume,” explains Barbara Rolls of Pennsylvania State University. Her studies show that if you trim the calorie density—that is, the calories per bite—people leave the table feeling full but with fewer calories in their belly (and, eventually, with less belly).

Her research team analyzed data from the Premier diet, which was similar to the OmniHeart higher-carb diet.⁵

“People who lowered their calorie density ended up eating fewer calories and losing more weight,” she explains. “The change in calorie density was the biggest predictor of six-month weight loss. And those people ate a pound more food a day.”

Rolls got similar results in a one-year trial.⁶ “Both groups were told to eat smaller portions and less fat,” she notes, “but only one group was also told to eat more fruits, vegetables, and broth-based soups.” That group lost more weight.

“We tell people to manage portions of calorie-dense foods and eat as much as they want of fruits and vegetables,” Rolls explains. “They’re free foods.”



Ratatouille. Veggies should fill at least half your plate. (See p. 7 for recipe.)

Her advice doesn’t apply to dried fruit or fruit juice. Nor does it apply to French fries, potato chips, or other starchy vegetables.

“Non-starchy vegetables like celery are the best way to lower calorie density,” says Rolls. “You’re mostly eating water and some bulk. Fruit should also be un-

limited because it’s got a low calorie density. You can only eat so much because you’re going to fill up.”

9. Eat veggies instead. Adding vegetables only curbs calories if you eat less of everything else. Barbara Rolls tried either adding vegetables to a dinner or substituting them for other foods.

“On the plate we had a prepared beef dish, a rice dish, and broccoli,” she explains. “When we went from a quarter to half a plate of broccoli and made the meat and grain portions smaller, people ate fewer calories in the meal.” The calories per bite—or calorie density—went down as the veggies went up.

“But if we just added broccoli to the meat and grain, people didn’t eat fewer calories,” she adds. “So if your goal is to cut calorie intake, you have to substitute vegetables for other ingredients.”

10. Cut liquid calories. When the Premier study began, most participants got 350 calories—nearly a fifth of their calories for the day—from soda, alcoholic beverages, juice, milk, and other drinks. (And in the OmniHeart study, participants were allowed up to 2 servings of alcohol a day.) Trimming those calories mattered more than cutting calories from solid foods.⁷

“Only a reduction in liquid calorie intake was shown to significantly affect weight loss during the six-month follow-up,” says Benjamin Caballero of the Johns Hopkins Bloomberg School of Public Health in Baltimore.

To boost your odds of losing (or not gaining) weight, it makes sense to cut most liquid calories.

That’s why our diet substitutes fruit for fruit juice. 🍓

¹ JAMA 294: 2455, 2005.

² Am. J. Clin. Nutr. 87: 1623, 2008.

³ N. Engl. J. Med. 360: 859, 2009.

⁴ Am. J. Epidemiol. 169: 893, 2009.

⁵ Am. J. Clin. Nutr. 85: 1212, 2007.

⁶ Am. J. Clin. Nutr. 85: 1465, 2007.

⁷ Am. J. Clin. Nutr. 89: 1299, 2009.



Veggie Good

BY KATE SHERWOOD

Here are more than a week's worth of delicious veggie-centric main dishes and main-dish salads for one person. Each delivers roughly 4 of your 11 daily servings of vegetables and fruit. These dishes weren't used in the OmniHeart Trial, but they have similar levels of saturated fat, sodium, and other nutrients.*

MAIN DISHES

Each of these four variations of a basic stir-fry evokes a different cuisine. The instructions:

- Sauté** vegetables, spices, any garlic, and the protein in the oil.
- Season** with salt (if listed) and toss in any herbs listed.
- Serve** with the rice, bulgur, or tortillas listed.
- Garnish** with any raw vegetables, lettuce, or Parmesan listed.

Curry

- 1 tsp. curry powder
- 2 cloves garlic, minced
- 1 tsp. grated ginger
- 1 large ripe tomato
- 2+ cups veggies (bell peppers, cauliflower, onions, carrots, mushrooms, peas)
- 6 oz. chicken or 1/2 cup cooked lentils
- 1 Tbs. canola oil
- 1/8 tsp. salt
- 1/2 cup cooked brown rice

Stir-Fry

- 2+ cups veggies (snow peas, broccoli, carrots, onions, mushrooms, celery)
- 6 oz. chicken or 4 oz. extra-firm tofu
- 1 Tbs. reduced-sodium teriyaki sauce (or other stir-fry sauce)
- 1 Tbs. peanut oil
- 1/2 cup cooked brown rice

Fajitas

- 1+ cup veggies (onions, bell pepper, mushrooms, zucchini)
- 6 oz. chicken or 1/2 cup canned black beans
- 1 tsp. chili powder
- 1 Tbs. canola oil
- 1/8 tsp. salt
- 4 sprigs cilantro
- 1/2 cup raw veggies (tomatoes, avocado, onion)
- Fresh lime juice, to taste
- 1/2 cup shredded cabbage or Romaine
- 1 6-inch whole wheat tortilla

Ratatouille

- 2 cloves garlic
- 1 Tbs. extra-virgin olive oil
- 2+ cups veggies (eggplant, bell peppers, onions, zucchini)
- 1/2 cup diced tomatoes
- 1/2 cup canned chickpeas
- 1/8 tsp. salt
- 2 sprigs basil
- 2 Tbs. freshly grated Parmesan
- 1/2 cup cooked bulgur

MAIN DISH SALADS

For each serving, arrange the ingredients and add no more than 2 Tbs. of dressing.

Pear & Cranberry

- 3 cups mixed salad greens
- 1/4 cup pistachios
- 2 Tbs. dried cranberries
- 1/2 pear, cubed
- 1/2 cup red grape halves
- 1 oz. Cabot 50% Reduced Fat Cheddar (or other light cheese)
- 2 Tbs. Balsamic Vinaigrette

Spinach

- 3 cups spinach
- 1/2 cup chopped boiled or roasted beets
- 1/2 apple, diced
- 1/2 cup canned chickpeas
- 2 Tbs. sunflower seeds
- 1 oz. reduced-fat soft goat cheese
- 2 Tbs. Classic Vinaigrette

Niçoise

- 4 oz. grilled tuna or salmon
- 3 cups mixed salad greens
- 1/2 chopped bell pepper
- 1/8 red onion, diced
- 5 cherry tomatoes
- 2-3 boiled baby potatoes, chopped
- 5 olives (or 2 anchovies)
- 2 Tbs. Classic Vinaigrette

Citrus

- 3 cups Bibb lettuce or mixed salad greens
- 1/2 avocado, chopped
- 1 orange, in slices
- 4 oz. broiled salmon or 1/2 cup canned white beans
- 2 radishes, sliced
- 2 Tbs. Creamy Citrus Dressing

Southwest

- 1 cup mixed salad greens
- 1/2 cup cherry tomatoes
- 1/2 cup corn kernels, fresh or thawed from frozen
- 1/2 cup chopped bell pepper
- 2 scallions, chopped
- 4 oz. cooked chicken or 1/2 cup canned black beans
- 1/4 tsp. chili powder
- 2 Tbs. Creamy Citrus Dressing

Asian Crispy

- 2 cups mixed salad greens
- 1 cup finely shredded red cabbage
- 1/2 cup snow peas, thinly sliced
- 1 carrot, shredded
- 1/2 cup edamame, thawed from frozen
- 2 Tbs. Sesame Ginger Dressing

DRESSINGS

Put all the ingredients in a small container with a tight lid and shake vigorously. Each recipe makes about 1 cup (16 Tbs.). Save the extra for your next salad.

Classic Vinaigrette

- 2 Tbs. Dijon mustard
- 3 Tbs. red wine vinegar
- Freshly ground black pepper, to taste
- 1/4 tsp. salt
- 2 tsp. honey
- 1 small shallot, minced
- 1/2 cup extra-virgin olive oil

Balsamic Vinaigrette

- 1/3 cup balsamic vinegar
- 1 clove garlic, minced
- 1/2 tsp. fresh thyme (optional)
- 1 Tbs. dark brown sugar
- 1/2 tsp. salt
- 2/3 cup extra-virgin olive oil

Creamy Citrus

- 1/4 cup orange juice
- 2 Tbs. fresh lemon juice
- 1/4 tsp. salt
- 1 clove garlic, minced
- 1/3 cup mayonnaise
- 1/3 cup canola oil

Sesame Ginger

- 1 Tbs. sesame seeds
- 2 Tbs. reduced-sodium soy sauce
- 1 Tbs. rice wine vinegar or cider vinegar
- 1 Tbs. minced ginger
- 1/3 cup unsweetened apple sauce
- 1 Tbs. toasted sesame oil
- 1/3 cup canola oil

* Each dish gets only 7 percent of calories from saturated fat and no more than 1 milligram of sodium per calorie. (That should help you get down to 2,300 mg of sodium on a 2,000-calorie diet.)