



OmniHeart Diets Provide More Options for Heart Health

The OmniHeart study (Optimal Macronutrient Intake Trial for Heart Health) compared the effects of three heart-healthy diets, each of which lowered blood pressure and improved blood lipids. All three diets follow the principles of the Dietary Approaches to Stop Hypertension (DASH) dietary pattern with some modifications. The three study diets differed in the amount of carbohydrates, protein, and unsaturated fat while keeping the calorie levels the same. One OmniHeart diet emphasized **carbohydrates**, another diet emphasized **protein**, and the third emphasized **unsaturated fat**.

The study findings showed that the protein-rich and the unsaturated fat-rich diets provided additional benefits on blood pressure and blood lipids and further reduced estimated ten-year risk of heart disease than the carbohydrate-rich diet. The trial was supported by the National Heart, Lung, and Blood Institute of the National Institutes of Health.

OmniHeart Dietary Patterns for 2100 calories

Food Group, Servings per day (USDA Pyramid 2000 Food Groups Servings)	Higher Carbohydrate Diet	Higher Protein Diet	Higher Unsaturated Fat Diet
Fruit and juices (half-cup)	6.6	3.8	4.8
Vegetables (half-cup)	4.4	5.4	6.3
Grains, mostly whole grains (1 oz or ½ cup)	5.3	5.0	4.3
Milk and milk products (cup)	2.1	2.5	1.9
Legumes, nuts, seeds, other vegetable protein (1 oz meat-equivalents)	1.3	3.0	1.2
Beef, pork, ham (1 oz)	0.9	1.1	1.0
Poultry (1 oz)	1.6	2.6	1.8
Fish (1 oz)	1.1	1.3	1.0
Egg product substitutes (1 oz meat-equivalents)	0.2	1.1	0.1
Desserts and sweets (tsp sugar)	4.6	2.5	1.7
Fats and oils (tsp)	6	3.5	12

Nutrient Targets (percent of calories)	Higher Carbohydrate Diet	Higher Protein Diet	Higher Unsaturated Fat Diet
Carbohydrates	58	48	48
Total fat	27	27	37
Monounsaturated fat	13	13	21
Protein	15	25	15

General OmniHeart Dietary Pattern Tips

- Eat 1-2 servings of fruit at every meal and have an extra fruit at breakfast.
- Have 2-3 servings of vegetables at lunch and dinner.
- Create a fruit and nut trail mix for snacks: ¼ cup dried fruit with 1 oz unsalted nuts.
- Each day have a serving of fat-free or low-fat milk and milk product (milk, yogurt, cheese) at two meals and occasionally at a third meal or snack.
- Use whole grains rather than refined grains as often as possible.
- Select lean versions of meats and remove skin from poultry.

Adapted Sample Menus at 2100 calories

The OmniHeart Carbohydrate Diet

Breakfast	Lunch	Dinner	Snack
1 cup grapefruit juice 1 oz (¼ cup) multi-bran chex 1 cup fat-free milk 1 extra large banana	Chicken Sandwich: 2 slices whole wheat bread 3 oz skinless chicken breast 1 Tbsp mayonnaise Salad: ½ cup lettuce with 1 tsp olive oil Trail Mix: 1 oz unsalted almonds 1 oz dried apricots	Penne Bean Pasta: ½ cup pasta; ½ cup spinach ¼ cup white beans; 1 oz meatballs ¼ cup tomato sauce; 2 tsp olive oil 1 Tbsp Parmesan cheese Tossed Salad: ¾ cup Romaine lettuce ½ cup cherry tomatoes Italian dressing (made with 1 tsp safflower oil) 1 cup grapes 1 small peppermint patty	1 medium apple ¾ cup fat-free yogurt

The OmniHeart Protein Diet

Breakfast	Lunch	Dinner	Snack
¾ cup tomato juice Scrambled Eggs: ½ cup egg substitute 2 Tbsp low-fat shredded cheese 1 tsp olive oil margarine Hot Cereal: ½ cup cooked bulgur wheat with soy flakes 1 oz raisins 1 cup fat-free milk	Vegetarian Burger: 1 hamburger roll; 3 oz vegetarian patty 1 Tbsp barbecue sauce 2 Romaine lettuce leaves 2 tomato slices 1/3 cup broccoli salad with apricots, celery, sunflower seeds and 1 tsp safflower oil ½ c unsalted tomato juice ½ c pears canned in juice ½ cup chocolate pudding (made with fat-free milk)	Black Bean Taco: ½ cup black beans 1 oz wheat protein 1/3 cup tomatoes 2 tsp olive oil 3 oz skinless chicken breast 1 oz tortilla chips 1/3 cup Three-Grain Pilaf 1 medium orange ½ c unsalted tomato juice 1 cup fat-free milk	¼ cup fat-free cottage cheese ½ cup mandarin orange sections 1 oz unsalted almonds

Tips to increase protein-rich foods:

- Have a serving of legumes, nuts, seeds or whole and high-protein grains (such as bulgur wheat, or millet), or lean meats, fish, and poultry with skin removed in at least 2 meals.
- Have a serving of fat-free or low-fat milk products at 3 meals or at 2 meals and a snack..
- Use egg whites or egg substitutes at breakfast and other meals and in recipes.
- Top whole grain cereals with 1 oz unsalted nuts.
- Spread unsalted peanut butter on whole grain toast.
- Add different kinds of beans in salads, recipes, and main dishes
- Try vegetarian meat substitutes in sandwiches, salads, mixed dishes such as chili, and as main course entrees.
- To maintain calories, limit desserts to 3 small servings per week or less (2½ tsp per day sugar) and limit fats and oils to 3½ tsp per day.

The Omni Unsaturated Fat Diet

Breakfast	Lunch	Dinner	Snack
1 cup orange juice ¾ oz (1 cup) corn flakes with ¼ cup raisins 1 cup fat-free milk 1 slice whole wheat bread toast with 1 tsp olive oil margarine	Chicken Sandwich: 2 slice whole wheat bread 3½ oz chicken breast 1 Tbsp barbeque sauce 1 tsp olive oil margarine Spinach Salad: ¾ cup spinach ½ cup tomato wedges 4 tsp olive oil; 2 tsp vinegar ¾ cup broccoli salad with apricots, celery, sunflower seeds 2 tsp safflower oil ¾ cup tomato juice (unsalted)	Black Bean Taco: ½ cup black beans ½ cup tomatoes 4 tsp olive oil ½ oz tortilla chips ¼ cup Three-Grain Pilaf 1 cup cooked carrot coins 1 cup fat-free milk 1 pecan cookie	½ cup mandarin orange sections 1 oz unsalted almonds

Tips to enrich monounsaturated fat:

- Have a tsp per day of olive oil or canola oil-based margarine on bread at lunch.
- Have 1 or 2 Tbsp of salad dressing made with olive or canola oil and vinegar in salads each day.
- Add a tsp of olive or canola oil or margarine in vegetables at dinner.
- Use olive or canola oil to saute vegetables and add to recipes.
- Have 1 oz of unsalted nuts rich in monounsaturated fat, like almonds, peanuts, and pecans as a snack or add to cereals.
- To maintain calories, limit desserts to 2 small servings per week or less (2 tsp per day or less sugar) and limit grains to 4 servings per day.

OMNI HEART STUDY PROTEIN DIET MENU

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Breakfast	Orange Juice Apple Bread Pudding	Tomato Juice Special K Cereal Banana Pecans Nonfat Milk	Grapefruit Juice Special K Cereal Sugar Packet Banana Nonfat Milk	Orange Juice Scrambled Egg Substitute Veggie Breakfast Sausage Links Toast/Margarine Banana 1% Fat Milk	Tomato Juice Scrambled Egg Substitute w/Shredded Cheese Bulgur Wheat w/Soy Grits Margarine Raisins Nonfat Milk	Orange Juice Toast/Peanut Butter Scrambled Eggs Margarine Veggie Breakfast Links	Cantaloupe Cheerios 1% Fat Milk Veggie Sausage Breakfast Patty
Lunch	Chicken Salad w/Seitan Sandwich Potato Chips- unsalted Spinach Leaves Cherry tomatoes Fresh Orange	Tuna Garbanzo Salad w/Tofu Bread Cantaloupe Cottage Cheese Spinach leaves Italian Dressing	Veggie Rollup on Tortilla w/Hummus, Chicken, & Mayo Raisins Almonds Sugar Free gelatin	Roast Beef Sandwich Lettuce/Mustard Broccoli & Walnut Salad Yogurt	Nonfat Milk Garden Veggie Patty On Roll w/Lettuce & Tomato Broccoli Salad Potato Chips- Unsalted	Chili w/Tofu Shredded Cheese Tortilla Chips Pear Halves Fig Newton Cookie Nonfat Milk	Chicken Breast Sandwich w/Mayo Broccoli Spears Tossed Salad Oil & Vinegar Canned Pineapple
Dinner	Nonfat Milk Pork Tenderloin Sweet Potatoes Corn Broccoli w/Shredded Cheese Dinner Roll Yogurt	Nonfat Milk Turkey Breast w/Gravy Macaroni & Cheese Steamed kale Canned Pineapple	Penne Bean w/Meatballs Grated Cheese Romaine & Cherry Tomatoes Italian Salad Dressing	Spaghetti and Sauce w/Seitan Lima Beans Bread/Margarine Grapes	Black Bean Taco Mix w/Diced Chicken Tortilla Chips Three Grain Pilaf Fresh Orange Chocolate Pudding	Apple Juice Baked Cod w/Bread Crumbs Lemon Juice Bulgur Wheat Salad Carrots Bread/Margarine Peppermint Patty	1% Fat Milk Lentil Loaf White & Black Bean Salad Zucchini Almonds Yogurt
Snack	Dried Apricots Cashews Almonds	Peanut Butter & Jelly Sandwich Canned Peaches	Yogurt Soy Nuts Sunflower Seeds	Wheat Crackers - unsalted Cheese Almonds & Peanuts	Cottage Cheese Mandarin Oranges Almonds	Tomato Juice Peanuts Chocolate Pudding	Apple Juice Tuna Salad in Roll Applesauce

OmniHeart Trial

UNSATURATED FAT DIET MENU

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Breakfast	Orange Juice French Toast Margarine & Syrup Applesauce Nonfat Milk	Orange Juice Toast/Margarine Corn Flakes Banana Nonfat Milk	Grapefruit Juice Multi Bran Chex Cereal Banana Nonfat Milk	Orange Juice Toast/Margarine Jelly Banana 1% Fat Milk	Orange Juice Toast/margarine Jelly Corn Flakes Raisins Nonfat Milk	Orange Juice Toast/Margarine Jelly Banana 2% Fat Milk	Cantaloupe Cheerios Wheat Bran Sugar Packet 1% Fat Milk
Lunch	Chicken Salad Sandwich Potato Chips Tossed Salad w/ Sliced almonds Oil & Vinegar Dressing Zucchini/Margarine Nonfat Milk Vanilla Sandwich Cookie	Tuna w/ Dill Salad Sandwich Margarine Lettuce & Tomato Yogurt	V-8 Juice Chicken Salad Sandwich w/ Lettuce Raisins Almonds	Roast Beef Sandwich w/ Lettuce/Mayo Broccoli & Walnut Salad Fresh Apple	Tomato Juice Chicken Breast Sandwich Margarine BBQ Sauce Tossed Salad Oil & Vinegar Dressing Broccoli Salad Potato Chips Sugar Free gelatin	Chili w/Tofu Ripe Olives Shredded Cheese Tortilla Chips Peanuts Pear Halves	Orange Juice Chicken Breast Sandwich w/Lettuce & Mustard White & Black Bean Salad Broccoli Spears Margarine Dried Apricots Pecans
Dinner	Tomato Juice Pork Tenderloin Sweet Potatoes Corn Broccoli DinnerRoll/Margarine Chocolate Pudding	Turkey Breast w/Gravy Macaroni & Cheese Steamed kale Bread/Margarine	Penne Bean w/Meatballs Romaine & Cherry Tomatoes Oil & Vinegar Dressing	Spaghetti w/Ground Beef, Diced Tomatoes, & Black Olives Parmesan Cheese Lima Beans Romaine & Cherry Tomatoes Oil & Vinegar Bread/Margarine Grapes	Black Bean Taco Mix Tortilla Chips Three Grain Pilaf Carrots Nonfat Milk Pecan Sandies Cookie	Apple Juice Baked Cod w/Bread Crumbs Lemon Juice Bulgur Wheat Salad Spinach Carrots Dinner Roll w/Margarine Peppermint Patty	1% Fat Milk Lentil Loaf Zucchini Tossed Salad w/ Sliced Almonds Oil & Vinegar Bread/Margarine Pecan Sandies Cookie
Snack	Dried Apricots Almonds	Dried Apricots Almonds Fresh orange	Yogurt Fresh Orange	Tomato Juice Almonds Yogurt	Mandarin Oranges Almonds	Yogurt Banana	Tomato Juice Tuna Salad in Roll