Adopt a...

## Whole Food Plant Based Diet

## ...and achieve GREAT HEALTH



Deanna Price, M.D.


## What can a Whole Food Plant Based Diet do for you?

* Helps you to lose weight, and keep it off
* Allows you to feel better and have more energy
* Improves your digestive health
* Prevents and treats high blood pressure, high cholesterol and diabetes
* Improves sexual function
* Reduces your risk of having a heart attack or stroke
* Reduces or eliminates prescription medications
* Reduces your doctors visits
* Helps you improve your children's health


## What is a Whole Food Plant Based Diet?

This is actually not a "diet" but an eating plan for life that encompasses plant based foods in their whole, unprocessed form. These foods include vegetables, fruits, beans, lentils, nuts, seeds, whole grains and a small amount of healthy fats. Foods not included are animal products, such as meat (including poultry and fish), dairy and eggs. It also does not include processed foods or foods with added sugar and it minimizes oils.

What is a processed food? For the most part, these are foods with ingredients that have been chemically or mechanically manipulated so they no longer resemble the original source (such as high fructose corn syrup, soybean oil and trans-fats) or that include chemicals you cannot pronounce. These are pro-inflammatory and can cause disease.

What is added sugar? Natural sugars from whole foods are included in this eating plan but added sugar should be avoided or substantially limited. This includes but is not limited to ingredients such as agave nectar, brown rice syrup, corn syrup, dextrose, fructose, cane syrup, cane juice, honey, maple syrup, molasses and sugar.

A comment on oils: Plant based oils are included in this eating plan but should be limited. They are, after all, a processed food and are essentially fat and calorie dense (1 tbsp of oil is 120 kcal ). In small quantities they can have health benefits. Healthier oils include olive and canola.

The amazing concept about adopting a Whole Food Plant Based diet is that disease can be prevented, treated and even cured. Approximately $80 \%$ of the most common diseases that cause death in the United States are lifestyle generated! This eating plan is a substantially cheaper way to improve health, avoiding expensive prescription medications with their myriad of side effects and procedures with their potential risks and complications. In addition, this diet is more humane to animals and gentler on the environment.

Don't think you can eat this way? Don't think you can give up cheeseburgers, fries and a soda? Use the information in this booklet and try a Whole Food Plant Based diet for at least 21 days. This is enough time to break the craving cycle. Even if you partially adopt this eating plan, your health will improve. However, the closer you get to $100 \%$, the more health benefits you will realize. Read on...we bet you will be pleasantly surprised at how inexpensive, easy and delicious a Whole Food Plant Based diet can be.


## Your New Food Groups

So what can you eat? There are thousands of different food choices in your new food groups, representing a wide variety of flavors and textures compared to the typical Western diet of meat, dairy and eggs. Below is a chart with some examples and a guide to suggested daily servings. Here are some tips...

1. For individuals with diseases such as obesity, diabetes, heart disease and stroke, consume less or no nuts, seeds, avocados and oils.
2. Choose unprocessed, whole foods instead of processed foods most of the time.
3. Choose beans, mushrooms or tofu over vegetarian meat substitutes (such as Tofurkey or Morning Star).
4. Choose whole grains (barley, quinoa, or brown rice) over refined grains (white bread or pasta made with white flour).
5. Choose fats from whole foods (avocado or olives) over processed oils (olive or canola).
6. If you have diabetes, chooses vegetables in higher quantities than fruits and grains.

| Category | Examples | Daily Serving | Serving Size |
| :---: | :---: | :---: | :---: |
| Non-starchy Vegetables | Spinach, carrots, cauliflower, asparagus, green beans, brussels sprouts, celery, eggplant, mushrooms*, onions, garlic, tomatoes, lettuce, sugar snap peas, summer squash, peppers, artichoke hearts, cabbage, cucumbers, kale, Swiss chard, mustard greens, collard greens, broccoli, bok choy | Unlimited (but at least 6 servings in 2-3 meals a day) | 1 cup raw leafy greens <br> 1/2 cup raw or cooked other vegetables |
| Starchy <br> Vegetables | Potatoes, yams, winter squash, corn, green peas, cassava (yucca), plantains | 0-2 servings | 1/2 cup |
| Fruits | Apples, oranges, bananas, berries, melon, papaya, grapes, mango, pineapple, kiwi, apricots, peaches, nectarines | 2-4 servings | 1 medium <br> 1 cup berries or melon cut up |
| Beans, Peas, Lentils or Meat Alternatives | Whole foods: Kidney, black, garbanzo, pinto, great northern, and adzuki beans; lentils; edamame (green soybeans); green and black-eyed peas; tofu; tempeh <br> Processed: <br> Processed soy or other protein patties or links (choose rarely) | 1-4 servings | 1/2 cup cooked beans |
| Nuts and Seeds | Almonds, cashews, sunflower seeds, walnuts, pistachios, flaxseeds, chia seeds, nut butters (nuts preferably raw and not salted) | 1-2 servings | 1 ounce (1/4 cup) nuts <br> 2 tbsp nut butters |
| Whole Grains | Whole grains: <br> Oats, brown or wild rice, buckwheat, barley, whole wheat, rye, bulgar, quinoa, farro, millet, sorghum <br> Processed grains: whole grain bread, whole grain unsweetened cereal, whole wheat tortillas, whole wheat or rice pasta | 4-8 servings | 1/2 cup cooked grain <br> 3/4 cup dry cereal <br> 1 slice bread <br> 1 small tortilla |


| Category | Examples | Daily Serving | Serving Size |
| :--- | :--- | :--- | :--- |
| Fats and Oils | Whole foods: <br> Avocados, olives <br> Processed oils: <br> Canola, extra virgin olive oil, coconut oil <br> and flaxseed oil | $0-2$ servings | $1 / 4$ avocado |
| Dairy <br> Alternatives | Unsweetened milk, such as soy, <br> almond, rice and hemp (look for brands <br> fortified with vitamin B12); soy, rice and <br> almond milk cheeses | $0-2$ servings | 1 cup milk |

* should be cooked
** the size of 2 regular dice

"Experts estimate that 90\% of type II diabetes, $80 \%$ of heart disease and 60-70\% of cancers are entirely preventable by diet and lifestyle changes."

Brenda Davis, R.D.


## Tips To Get Started

* Think about the meatless meals you already cook at home. This may include whole-wheat pasta with marinara sauce, black beans and rice or lentil soup and salad (avoid creamed dressings...best to just use vinegar or a squeeze of citrus).
* Change a favorite recipe to be Whole Food Plant Based:

1. Make burritos or tacos with beans, portobello mushrooms, rice and vegetables without the meat and cheese.
2. Prepare chili with beans and no meat (try adding butternut squash too).
3. Replace burgers with veggie burgers, black bean burgers or grilled portobello mushrooms.
4. Make kebabs with vegetables and fruit such as onions, bell peppers, summer squash, mushrooms, tomatoes, pineapple and mango.
5. Make lentil or split pea soup without adding meat or using chicken or beef broth (use vegetable broth instead).
6. Prepare large quantities of food on weekends and fill containers for freezing for easy access during the busy week.
7. Prepare bags of healthy snacks for yourself and kids ahead of time.

* Try some new recipes. At the end of this booklet, you will find a list of books and websites that have recipes you can try.
* Frozen fruits and vegetables, precooked grains and canned beans are a quick and easy way to prepare and eat more plant foods.
"It comes down to what you put on your fork."
Mark Hyman, M.D.


## Meal Planning Ideas

| Breakfast | Old-fashioned oatmeal with cinnamon and apples and soy milk <br> Half a cantaloupe and a slice of whole wheat toast <br> Grape Nuts or Shredded Wheat with blueberries and almond milk <br> Blueberry pancakes (plant based) with maple syrup <br> Cream of Wheat or grits with raisins <br> Tofu scramble with sautéed onions, mushrooms and bell pepper |
| :--- | :--- |
| Lunch | Whole-wheat pita with hummus, tomatoes, red onions and cucumber <br> Kale sautéed with vegetable broth <br> Green salad with vegetables and balsamic vinegar <br> Black bean chili <br> Vegetable soup <br> Quinoa bean salad* |
| Dinner | Spaghetti with marinara sauce <br> Stir fry vegetables over brown rice or rice noodles <br> Spinach lasagna <br> Marinated grilled eggplant* <br> Bean burrito with lettuce, guacamole and tomato <br> Split tea soup with corn bread <br> Veggie burger with sauteed mushrooms and baked sweet potato fries* |
| Snacks | Fresh fruit or applesauce (without added sugar) <br> Fruit smoothie <br> Dried fruits and nuts <br> Vegetable sticks with hummus <br> Baked chips with salsa <br> Soy or coconut milk yogurt |
| Desserts <br> (limit desserts, <br> should be a rare <br> treat) | Poached pears with raspberry sauce <br> Baked apples stuffed with raisins and cinnamon <br> Fruit popsicle (without added sugar) <br> Soy, almond or coconut milk ice cream <br> Homemade cookie or baked goods* (no oil or dairy) |

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## Ingredient Substitution Chart

| MEAT SUBSTITUTIONS |  |
| :--- | :--- |
| Legume | Beans, peas and lentils are an all natural high fiber protein source that can <br> easily be used as the main course or in place of meat in recipes. |
| Vegetarian <br> Burgers | Made form a variety of plant foods including vegetables, grains and soy, <br> provides a meat like taste and texture and can substitute for ground meat. <br> (Look for ones without dairy or eggs.) |
| Tempeh | Made from fermented soybeans, has a distinct flavor and meaty texture that <br> can be used in place of ground meat and works well in curries, chilies and <br> stir-fries. |
| Seitan | Made from wheat gluten, is well suited for shaping into roasts or for replacing <br> strips or chunks of meat in recipes such as fajitas, stews or stir-fries. |
| Portobello <br> mushrooms | Have a savory flavor for filling a meat layer in a dish or as a burger at your <br> next barbecue, especially after marinating in low fat dressing or balsamic <br> vinegar and then grilling or heating in a frying pan (without oil). |
| Tofu | A curd made from soybeans, is mild in taste and easily absorbs the flavor of <br> any recipe. Soft tofu works well in soups, sauces and desserts and firmer <br> varieties work well in stir-fries and other recipes requiring tofu to hold its <br> shape. For a denser texture, freeze tofu, thaw and squeeze out excess water <br> before using it in your recipe. |
| Stocks | Textured <br> vegetable <br> protein (TVP) |
| Made of defatted soybeans, provides a substitute for ground beef. <br> (1-2 tbsp soy sauce per cup of liquid). |  |


| EGG SUBSTITUTIONS (1 egg) |
| :--- |
| $1 / 2$ cup silken tofu blended |
| $1 / 2$ mashed banana |
| $1 / 4$ cup applesauce or pureed fruit |
| $11 / 2$ tsp of Ener-G Foods Egg <br> Replacer + 2 tbsp lukewarm water |
| 1 tbsp ground flaxseed meal + 3 tbsp <br> water or plant based milk |
| $1 / 2$ cup mashed white potatoes or <br> sweet potatoes |
| 2 tbsp potato starch, cornstarch or <br> arrowroot |
| $2-3$ tbsp tomato paste |
| $1 / 3$ cup cooked oats |
| $2-3$ tbsp bread crumbs |
| $2-3$ tbsp flour |
| 1 tsp baking powder |


|  | DAIRY SUBSTITUTIONS |  |
| :--- | :--- | :---: |
| Milk | Almond, oat, soy, hazelnut, flax or rice <br> milk |  |
| Creams | Almond milk, soy milk, coconut milk, <br> cashew cream, mashed potato, <br> pureed garbanzo beans, pureed tofu, <br> soy sour cream, soy whipping cream <br> or soy creamer |  |
| Parmesan <br> cheese | Nutritional yeast, garlic power and <br> chopped walnuts or almonds |  |
| Cheese | Soy, rice, nut based cheese <br> alternatives or nutritional yeast |  |
| Butter | Dairy free non-hydrogenated <br> margarine for cooking, baking or <br> spreading. Some brands include <br> Earth Balance and Spectrum (use <br> sparingly) |  |
| Ricotta <br> cheese | Firm tofu, drained and crumbled <br> Buttermilk <br> Curdled soy milk (1 cup soy milk + 2 <br> tbsp lemon juice or white vinegar) <br> Cottage <br> cheese <br> Tofu cottage cheese, crumbled tofu <br> Cheam <br> cheese <br> MayonnaiseTofu cream cheese <br> Mayo mayonnaise, Vegenaise, Just <br> Mogurt sparingly) |  |
| Soy yogurt, coconut milk yogurt |  |  |
| Ice Cream | Soy, coconut milk ice cream, fruit <br> sorbets |  |

## Cooking Techniques

Sautéing Without Oil: Surprisingly, plain water or vegetable stock make an excellent sautéing liquid. It prevents foods from sticking to the pan and allows the vegetable to brown and cook. You simply have to continue to add more liquid as it dries, before burning the vegetables. With continued time and addition of liquid, the vegetables can be browned as well without the use of oil. For more flavor, instead of water use...

Vegetable broth
Soy sauce (Tamari)
Red or white wine (alcoholic or non alcoholic)
Sherry (alcoholic or non alcoholic)
Rice vinegar or balsamic vinegar

Tomato juice
Lemon or lime juice
Salsa
Worcestershire sauce

Baking Without Oil: Baking with less oil can be a challenge. Replace the oil in the recipe with $1 / 2$ the amount of another moist food such as applesauce, mashed bananas, mashed potatoes, mashed pumpkin or puree, tomato sauce or paste, soft silken tofu or soy yogurt. Cakes and muffins made without oil will be heavier. Be sure to test before removing from the oven, baking times may need to be longer.

Cooking Legumes (Beans, Lentils, Peas): Beans take the most cooking time and although they are widely available in the can, the most economical way to purchase beans is buying them dried. Beans should be soaked overnight in cold water (do not add salt). Cover the beans with several inches of water, then drain the next day. Place beans in a large pot and cover with about three inches of water and bring to a boil. Reduce heat to low, cover and cook at gentle boil for the recommended times. Cook until tender. The longer you cook them, the more the indigestible carbohydrates are broken down and the less trouble with bowel gas.
Below are some guidelines.

| Beans (1 cup) | Time (min) | Yield (cups) |
| :--- | :--- | :--- |
| Adjuki | $50-60$ | 3 |
| Black | $60-90$ | $2-21 / 2$ |
| Black-eyed Peas | $50-60$ | $2-21 / 2$ |
| Garbanzos | $90-120$ | 2 |
| Kidney | $40-60$ | 2 |
| Lentils | $40-50$ | 2 |
| Split Peas | 45 | 2 |
| Lima | $50-60$ | 2 |
| Pinto | 90 | $21 / 2$ |
| White | 120 | 2 |

Slow cookers are convenient and they are an easy way to cook dried beans. Place legumes in a slow cooker and cover with about three inches of water. Cook for 6-8 hours on high or 10-12 hours on low.

Cooking Grains: Place water or vegetable broth in a pot. Bring to boil. Add grains and bring to a boil again. Reduce to low-medium simmer and cover. Cook until all the liquid is absorbed. The time needed to cook varies, but below are some guidelines.

| Grain (1 cup) | Liquid (cups) | Cooking Time (min) | Yield (cups) |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
| Barley, pearled | 3 | $45-55$ | $31 / 2$ |
| Brown rice | 2 | $45-50$ | $21 / 2$ |
| Bulgur | 2 | 15 | $21 / 2$ |
| Millet | 3 | 20 | $3-31 / 2$ |
| Quinoa | 15 | $21 / 2$ |  |
| Spelt berries, whole | $2-3$ | $45-50$ | $21 / 2$ |
| Wheat berries, whole | 3 | $90-120$ | $3-31 / 2$ |
| Wild rice | 3 | $50-60$ | 4 |

## Tips for Eating Out

Many restaurants offer some meatless options or side dishes. Restaurants are often willing to make changes to menu items by switching to meatless sauces, removing meat from stir-fries, adding vegetables or pasta in place of meat and using less or no oil. Restaurants that make food to order may be more willing to make these changes.

Many ethnic restaurants, such as Indian, Chinese and Thai, offer a variety of plant-based dishes and sides. Mexican...try a bean burrito or grilled vegetable fajita (no cheese please). Italian...ask for pasta (preferably whole grain) with marinara sauce or pasta primavera. Japanese...try some vegetable sushi rolls. Chinese....order mixed vegetables, tofu, soup or rice. Check out the website happycow.net to find a meatless restaurant near you.

## Tips for Traveling

Traveling and staying on a healthy diet can be challenging. Eating fast, convenient foods without a plan can cause you to revisit some unhappy "tummy" memories and reduce energy. So, since you want to enjoy your vacation to its fullest, here are some healthy tips. Carry healthy snacks with you such as fruits, whole grain pita or low sodium crackers (such as Triscuits), hummus, dried fruit, unsalted nuts, sliced vegetables, apple sauce cups and, of course, water.

Request a room with a refrigerator so you can bring boxes of plant based milk along with some whole grain cereal. Add some fruit and you have got yourself a nice breakfast to get you going. You can also use the milk for your coffee or tea. A basket of fruit in your room is not only colorful but makes a great snack.

## Special Nutrients to Consider

## PROTEIN

Protein is in every cell of the body. It is used to build and repair muscles, bone, skin and the immune system. We also need it to make hormones and enzymes. Proteins are made up of amino acids. Your body can make some of the amino acids, but not all of them. The ones your body cannot make are called essential. You can easily meet your protein needs each day from plant foods.

Adults needs 0.36 grams per pound of body weight. That boils down to 48 grams of protein for a 132 lb women and 56 grams of protein for a 154 lb male. In general protein should represent $8-10 \%$ of your daily calorie intake. Western diets often are $30-40 \%$ protein and $80 \%$ of it is from animals.

## VITAMIN B12

Your body needs vitamin B12 to make red blood cells and for nerve function. If you don't get enough B12, you can develop anemia resulting in fatigue or nerve damage resulting in numbness and tingling to the limbs. Most B12 comes from animal foods (made from bacteria in the animal's gut). Our ancient ancestors used to get B12 from the bacterial containing soil that remained on the fresh produce. Now our produce is washed so thoroughly the B12 has been removed. B12 is found in nutritional yeast and some fortified foods such as:

* Cereals
* Meat substitutes
* Rice or hemp milk

Read labels for these products to make sure B12 has been added. Because it may not be easy to get enough B12 from fortified foods, it may be best to take a supplement. As you get older, your body is not able to absorb as much B12. A supplement may be needed.

## IRON

Iron is a mineral in the blood that carries oxygen. Getting enough iron is important for everyone, especially pregnant women, women of childbearing age, children, and infants. Iron-rich plant foods include whole-grain breads and cereals, dried beans and peas, dark green leafy vegetables, dried fruits, nuts, and seeds. Some foods, such as breakfast cereals, are fortified with iron. The type of iron found in plant foods (non-heme iron) is not absorbed as easily as the iron in animal products (heme iron). However, eating iron-rich foods along with vitamin C can help your body better use the iron. Some foods with vitamin C include oranges, mangos, kiwis, strawberries, red peppers, tomatoes, broccoli and bok choy. Most people eating a plant-based diet are not iron deficiency, however, some people may need to take a supplement.

## CALCIUM

Calcium helps build bones, nails and teeth. It is also important for the function of the heart, muscles and nerves. Good sources of calcium are collard greens, cabbage, bok choy, kale, tofu, and broccoli. Beans are high in calcium as well. There are also many calcium-fortified foods, such as soy or almond milk, orange juice and cereal. Think "beans and greens".

## ZINC

Zinc is important for the immune system, wound healing, and blood sugar control. Good sources are whole grains, tofu, tempeh, beans, peas, lentils, nuts, seeds and fortified breakfast cereals.

Compounds in plant foods called phytates keep zinc from being absorbed. This can be improved by soaking beans, grains and seeds in water for several hours before cooking. Eating sprouted grains (like Ezekial brand bread) and beans, and leavened grains, such as bread, instead of crackers also increases absorption. Some foods are fortified with zinc.

## VITAMIN D

Vitamin $D$ is needed for strong bones. It is also needed for muscles and nerves and the immune system to work properly. Very few foods have vitamin D. We get most of our vitamin D when the skin (without sunscreen) is exposed to the sun. Many people do not make enough from sun exposure alone. It generally takes 20 minutes of exposure to the arms and face to meet your daily needs. Some foods, such as soy or almond milk and cereal have added vitamin D. You may need to take a supplement.

## OMEGA 3 FATTY ACIDS

Alpha-linoleic acid (ALA) is an essential omega 3 fatty acid found in seeds, nuts (especially walnuts), ground flax seed and some common vegetable oils. ALA is converted to docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA) which are vital to many metabolic processes. The latter can also be found in fatty fish and may lower the risk of heart disease and help the immune system and the brain. But fish does not have to be consumed to get adequate levels of Omega 3 fatty acids. For some people, including pregnant women or people with chronic health conditions, taking a supplement may be helpful.

## *** IMPORTANT WARNING: Tell Your Physician You have Adopted a Whole Food Plant Based Diet ***

Making a lot of healthy changes to your diet can lower your blood sugar, blood pressure and cholesterol. A whole food plant based diet can also affect the dosing of some of your medications. Please notify your physician that you have adopted this new healthy diet so the appropriate change in dosing can be made.


## Congratulations on taking this important step to increase your energy, well being and to achieve GREAT health!

"Everyone wants to be healthy, but very few people choose to be healthy. You don't get healthy by accident. It's intentional. It's a
choice"
Rick Warren, Minister

## Thanks for choosing health!

## Resources

## Websites with Recipes and More

* forksoverknives.com/category/recipes
* fatfreevegan.com
* drmcdougall.com/newsletter/recipeindex.html
* rebootwithjoe.com/recipes
* pcrm.org/health/diets/recipes
* 21daykickstart.org
* engine2diet.com
* straightupfood.com
* nutritionfacts.org
* static.ewg.org (for good food on a tight budget)


## Movies

* Plant Pure Nation (2015)
* Fed Up (2014)
* Forks Over Knives (2011)
* Fat Sick and Nearly Dead (2011)
* Vegucated (2010)
* Food, Inc. (2008)
* Food Matters (2008)


## Books

The Spectrum: A Scientifically Proven Program to Feel Better, Live Longer, Lose Weight and Gain Health. Dean Ornish, M.D.

Prevent and Reverse Heart Disease: The Revolutionary, Scientifically Proven, Nutrition-Based Cure. Caldwell B. Esselstyn, Jr., M.D.
The Engine 2 Diet: The Texas Firefighter's 28-Day Save-Your-Life Plan That Lowers Cholesterol and Burns Away Pounds. Rip Esselstyn.
The Starch Solution: Eat the Foods You Love, Regain Your Health, and Lose the Weight for Good? John A. McDougall, M.D., and Mary McDougall.
Eat to Live: The Revolutionary Formula for Fast and Sustained Weight Loss. Joel Fuhrman, M.D.
The End of Diabetes. Joel Fuhrman, M.D.
The Complete Idiot's Guild to Plant-Based Nutrition. Julieanna Hever, M.S. R.D., C.P.T.

The China Study: The Most Comprehensive Study of Nutrition Ever Conducted and the Startling Implications for Diet, Weight Loss, and Long-Term Health. T. Colin Campbell, Ph.D. and Thomas M. Campbell II, M.D.
21-Day Weight Loss Kickstart: Boost Metabolism, Lower Cholesterol, and Dramatically Improve Your Health. Neal Barnard, M.D.
The Cancer Survivors Guide: Foods That Help You Fight Back. Neil Barnard, M.D.

Food Over Medicine. Pamela Popper
The Food Revolution. John Robbins
Salt, Sugar, Fat. Michael Moss

## About the Author



Deanna Price, M.D., received her medical degree at University of California, San Diego School of Medicine, graduating in 1996. After completing residency and Chief residency at Scripps Mercy Hospital in San Diego, she worked in a thriving internal medicine practice in Hillcrest from 2000 to 2015. She has now focused her attention on the good people of Yavapai County and is working for the Yavapai Regional Medical Center in Prescott Arizona. Feeling strongly that individuals can live better lives, prevent and treat disease with lifestyle, she has earned a certificate in Plant Based Nutrition from Cornell University and has a certificate in Personal Fitness Training. She continues to focus her education in nutrition and lifestyle medicine in order to pass on the evidence based news to her patients.

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