

Vegetarian Diets: Advantages for Children

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Encouraging children to eat well, right from the start, will have a positive impact on them in the future, affecting health, weight, and need for medical treatments. Unfortunately, with the mixed messages we hear from the media, obtaining accurate information on nutrition can present a challenge.

In May 1998, the seventh edition of *Dr. Spock's Baby and Child Care* was published. In it, Dr. Spock recommends a vegan diet for children. This sparked a long overdue discussion about the scientific and practical issues of optimal diets for children. In response, this document was prepared by a panel of nutritionists to address three main areas: the advantages of vegetarian and vegan diets, the safety of vegan diets, and planning meals for children.

THE ADVANTAGES OF VEGETARIAN AND VEGAN DIETS

Vegetables, grains, fruits, legumes, and nuts are the optimal foods for children. Rich in complex carbohydrates, protein, fiber, vitamins, and minerals, they form the foundation for dietary habits that support a lifetime of health. Research indicates that adults who consume fruits and vegetables are those who consumed these foods during childhood.¹ Here are some of the long-term advantages of plant-based diets:

- The prevalence of hypertension among vegetarians is about one-third to one-half that of non-vegetarians.²⁻⁴ A study of Caucasian Seventh-day Adventists found hypertension in 22 percent of omnivores, but only 7 percent of vegetarians. Among African Americans, the prevalence was 44 percent of omnivores and 18 percent of vegetarians.⁴ Adopting a vegetarian diet significantly lowers blood pressure in both normal and hypertensive individuals.⁵⁻⁹
- Cholesterol levels are much lower in vegetarians.¹⁰⁻¹³ Vegetarian diets reduce serum cholesterol levels to a much greater degree than is achieved with the National Cholesterol Education Program Step Two diet.¹⁴⁻¹⁷ In one study published in *The Lancet*¹⁶ total cholesterol in those following a vegetarian diet for 12 months decreased by 24.3 percent.
- Cancer rates for vegetarians are 25 to 50 percent below population averages, even after controlling for smoking, body mass

index, and socioeconomic status.^{18,19} One study found that people who include generous amounts of fruits and vegetables in their daily diets have lower rates of cancers of the lung, breast, colon, bladder, stomach, mouth, larynx, esophagus, pancreas, and cervix compared to people who avoid such foods.²⁰

- Obesity is a major contributor to many serious illnesses, and is much less common among vegetarians, compared to the general population.^{21,22} Vegetarians are, on average, about 10 percent leaner than omnivores.^{3,4,11,21-24}
- Plant-based diets may encourage a later menarche, which has been shown to be associated with reduced risk of breast cancer in epidemiologic studies.^{25,26}
- Fruits and vegetables contain antioxidant substances, such as vitamin C, vitamin E, and carotenoids, which protect cells against oxidative damage, which is related to cancer risk and other health problems.²⁷ The multitude of phytochemicals found in various fruits, vegetables, grains, legumes, and nuts are thought to protect against heart disease and cancer.²⁸

SAFETY OF VEGAN DIETS

Given these advantages, does evidence show that vegan diets adequately meet the nutritional needs of children? The answer is clearly yes. According to the American Dietetic Association's position paper on vegetarian diets,²⁹ "Appropriately planned vegan and lacto-ovo-vegetarian diets satisfy nutrient needs of infants, children, and adolescents and promote normal growth."

In one study, pediatric developmental tests in vegetarian children indicated mental age advanced over a year beyond chronological age, and mean IQ was well above average (with an average of 116 points), providing reassurance that brain development is normal.³⁰ Questions about the adequacy of plant-based diets were raised by Dagnelie³¹ and Dwyer³² who observed poor growth in children following a strict macrobiotic diet. The feeding practices of macrobiotic families can vary greatly from those of vegan families. Some very strict macrobiotic diets may lack adequate calories due to fat restrictions, and these diets have been modified more recently to permit the inclusion of somewhat more fat, such as is found in seeds and nuts.³³

Most parents find it easy to plan a vegan diet that is adequate in protein, calories, vitamins and minerals. Following a vegan diet has been made easier in recent years since vegetarian products fortified with calcium, vitamin D, and vitamin B₁₂ are available in most food stores. For example, fortified Tropicana-brand orange juice contains 350 milligrams of calcium per eight-ounce serving, with a 36 to 38 percent absorption fraction according to the manufacturer, compared with a 32 percent absorption rate from cow's milk.³⁴ Orange juice also supplies good amounts of folic acid, vitamin C, and phytochemicals, with no fat or cholesterol. Vegetarian hot dogs, burgers, fortified soy and rice milks, vegetarian deli slices, and other meat analogs are also readily available.

Calorie, protein, and all other nutrient needs can be easily met by a vegan diet, supplemented with vitamin B₁₂.

- **Calcium**—Some of the best vegan sources are fortified soy or rice milk, fortified cranberry, orange, or apple juice, collard greens, mustard greens, turnip greens, kale, broccoli, blackstrap molasses, tofu processed with calcium sulfate, and tempeh. Calcium absorption from these foods has been shown to be excellent.³⁴

- **Vitamin D**—Vitamin D is normally produced within the body after sunlight exposure to the skin. If children do not get regular sun exposure or live in northern areas, fortified foods and supplements (such as any common multivitamin) are available.

- **Protein**—A diet drawn from varied plant sources easily satisfies protein requirements, providing all essential amino acids, even without intentional combining or “protein complementing” as long as calorie intake is also adequate. Good protein sources include cooked beans, tofu, soy yogurt, tempeh, seitan, nuts, seeds, and whole grains.

- **Calories**—Concern has been expressed that the increased bulk provided by certain foods in the vegan diet will cause a child to feel full before he has consumed enough calories. Including some refined grained products and peeled, cooked vegetables can reduce the bulkiness of meals. Nuts and seed butters, avocados, dried fruits, and added fats (e.g., vegetable oils) can provide additional concentrated calories without bulk.

- **Vitamin B₁₂**—Produced by microorganisms in the small intestines of humans and animals, vitamin B₁₂ made by humans is not well absorbed and retained. Plant foods contain little of this nutrient. However, it can be easily obtained from vitamin B₁₂ fortified breakfast cereals (Kellogg's Corn Flakes, Grape-Nuts, Total, Product 19), fortified soymilk, nutritional yeast (Red Star Vegetarian Support Formula), B₁₂ fortified meat analogs, or any common multivitamin. When reading labels, look for the words “cyanocobalamin” or “cobalamin” in the ingredient list. These are the most absorbable forms of vitamin B₁₂.

- **Iron**—Diets consisting of vegetables, fruits, grains, legumes, and nuts provide adequate iron.³⁵⁻⁴⁰ Consuming foods rich in vitamin C, such as orange juice, with iron-rich foods enhances the absorption of iron. Some foods are naturally rich in both iron and vitamin C, such as broccoli, Swiss chard, and other dark green leafy vegetables. Other good iron sources include iron-fortified cereals, enriched bread, pasta, rice, soybeans,

chickpeas, and blackstrap molasses. Dairy products are extremely low in iron and may interfere with iron balance, especially in very small children.

- **Zinc**—Good sources include legumes, nuts, and zinc fortified breakfast cereals (Bran Flakes, granola, Grape-Nuts, Special K).

Practical information on meal-planning is provided in an addendum to this report suitable for distribution to interested parents.

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TIPS FOR PARENTS

Vegan diets are safe and offer health advantages, but how does this translate into practical guidelines for parents? Here are some tips for dealing with common situations.

School Lunches / Snacks

It would truly be a challenge to find a classroom where every student eats the same foods. Lactose intolerance, food allergies, ethnic preferences, and religious or dietary restrictions all influence food choices. The classroom can provide an opportunity to introduce students and teachers to healthy foods. Fresh fruit, veggies cut into fun shapes served with bean dip, muffins, and crackers spread with nut butter and fruit, are all healthy, delicious snacks.

Be sure to discuss food issues with your child's teacher. Find out if the teacher has any classroom rules regarding foods. For example, some teachers may not allow candy or other sweets to be eaten in the classroom—a sign of helpful nutritional interest and concern. Discuss the reasons that your child follows a vegan diet and provide the teacher with nutrition information. Airing these issues ahead of time helps head off problems by familiarizing the teacher with vegan diets. Donating books or cookbooks to the school library is helpful. It's also useful to link up with like-minded parents for mutual support.

The variety of vegetables, legumes, grains, and fruits available can make for interesting school lunch fare. For parents

concerned that their child's meal will be "different," try meat analogs, soy cheese, or soy yogurt. Leftovers are another quick and easy lunchtime alternative. Experiment with these suggestions:

- **Sandwiches**—Try hummus or another bean spread with sliced tomatoes, cucumbers, and shredded carrots in pita bread. Many whole foods stores and some grocery stores sell vegan deli slices that look and taste like bologna, Canadian bacon, roast beef, and turkey. Serve on whole-grain bread with soy cheese, mustard, lettuce, and tomato. Peanut butter is an old standby. For variety, try other nut butters, such as cashew, almond, or hazelnut, with sliced banana or peaches on whole wheat bread. Cutting sandwiches into novel shapes is fun for kids.
- **Hot meals**—Fill a wide-mouth thermos with just-made or leftover pasta and tomato sauce, hearty bean soup, veggie chili, or stew. Or make your own vegetarian version of "franks & beans" using vegetarian hot dogs and vegetarian baked beans.
- **Soups**—Warm your child with homemade vegetable or bean soups. If you are short on time, try a low-sodium instant soup. Just stir hot water into the soup mix and pour into a thermos. Round off the meal with some crackers, crunchy baby carrots, and soy or rice milk.
- **Side dishes**—Choose a couple of the following suggestions to complete your child's meal: individual boxes of soy or rice milk, soy yogurt, chopped vegetables and dip, whole grain breads or crackers, homemade muffins, rice cakes, pretzels, or fresh fruit. Although the United States Department of Agriculture still mandates that cow's milk be served with school lunches,

many schools will allow juice to be substituted, if you present a physician's note.

Birthday Parties

Whether the celebration occurs at school or at home, your child needn't feel like an outsider. If the celebration is for another child, offer to bring a dish or dessert to the party. Some popular foods are listed below:

- **Hot dogs**—Vegan versions of the traditional meat hot dogs are widely available. Try some of the following brands: Lightlife Smart Dogs or Tofu Pups, Yves Veggie Weiners or Tofu Weiners. Sauerkraut, relish, ketchup, and mustard go well with any of these.
- **Hamburgers**—Many types of vegan burgers are available in grocery stores or whole foods stores. Try some of the following brands: Boca Burgers, Garden Vegan, or Harvest Burgers. Allow children to add their own toppings—ketchup, mustard, pickles, onions, lettuce, tomato, or relish.
- **Pizza**—Spread tomato sauce on plain bagels or English muffins and have children top them with a variety of fresh vegetables, such as chopped onions, mushrooms, peppers, broccoli, or olives. Add a sprinkle of soy cheese for more flavor. If you have time, make or purchase pizza dough and cut the dough into a variety of shapes. Have the kids add the toppings and bake.
- **Dessert**—Try fruit smoothies using soy or rice milk and frozen fruit. Watermelon slices always go over well with kids. Or prepare a fruit salad, cutting the fruit into a variety of shapes.

If you are making a cake or cupcakes, try some of the following suggestions for replacing eggs and/or dairy in the recipe:

- To replace eggs in baked goods, substitute 2 tablespoons of cornstarch, 1 ounce (2 tablespoons) soft tofu, 1/3 cup applesauce, or 1/3 cup pumpkin for each egg. Half of a small mashed banana can also replace each egg—and tastes great in pancakes or muffins. Commercially prepared substitutes such as Ener-G Egg Replacer (a mixture of potato starch, flour, and leavening) can also be used per package instructions.
- Replace milk with soymilk or rice milk, cup for cup, in any recipe. For buttermilk, substitute each cup with 1 cup of soymilk or rice milk plus 1 tablespoon of vinegar. For yogurt in recipes, replace each cup with 3/4 cup soymilk or rice milk plus 1 tablespoon of vinegar.

How to Feed a Picky Toddler

Whether omnivore or vegetarian, toddlers will take a stand on what they will or will not eat. There is no obvious rhyme or reason to this, and it can make providing a nutritious, balanced meal a real challenge. These tips may help.

- Involve your child in meal preparation. Let your toddler mash a banana or add some dried raisins to a recipe. Explain what you are preparing, and if you can be flexible about the ingredients, let the toddler choose.
- Children learn by example. Eat the same vegetarian foods as you serve your child. They are healthy for both adults and

children.

- If a toddler refuses a food the first time it is offered, don't give up hope. Sometimes it takes several tries for a child to accept a new food. Offering a small amount of the new food with something familiar—and well-liked by the child—may help. Or, if a food isn't accepted in one form, try another. For example, if a child doesn't like chunks of tofu, try making it into a dip and serve with steamed vegetable strips.
- If your child dislikes plain soy or rice milk, try various flavors; mix with hot or cold cereal; use in pancakes or muffins; or blend with fruit to make a shake.
- Keep the dishes simple and don't pile on the food. A complicated unfamiliar dish that covers the plate may seem a bit daunting to a child. Simple finger foods—steamed vegetable strips, crackers, or chunks of cooked tofu make eating easy and fun for a child.
- Include favorite or familiar foods in a variety of recipes. Cook rice in a mixture of fruit juice and water, or thin nut butter with some soymilk to make a pasta sauce.
- If a child refuses vegetables, try finely shredding dark green leafy vegetables or carrots and adding to tomato sauce or loaf mix. Mix vegetables with grains and wrap in a tortilla. Or, if your child likes mashed potatoes, add in some finely shredded vegetables, such as zucchini or squash.

Quick and Easy Meals

Parents with little time to cook can still serve nutritious, delicious vegan meals for their families, and will enjoy not having to clean messy chicken grease or risking foodborne illness from undercooked animal products. Convenience foods available in grocery and health food stores can make preparing meals a snap. Here are some quick meal solutions:

- **Plan for leftovers.** Cooking soups, sauces, or main dishes in batches can save lots of time. Store extras in individual microwavable containers, then label and freeze or refrigerate them for later use. Grains can be cooked in quantity and used over several days. Last night's rice can be tonight's rice pudding.
- **There is a huge variety of vegetarian cookbooks available with recipes for quick and easy meals.** Pick up one or two at the library or bookstore and find a few easy meals to make.
- **Save time at the store by planning your meals ahead.** Pick a few recipes and use the ingredient list as your shopping list.
- **Try low-salt vegetarian soups in cans or cups.** Some soups are quite thick and can even be used as sauce over pasta, potatoes, vegetables, or rice. Good brands include Fantastic Foods Hearty Soup Cups or Couscous Cups, and Nile Spice Cups of Soup.
- **Canned vegetarian chili or refried beans can be heated and served over leftover rice.** Add refried beans, tomatoes, lettuce, and salsa to a flour tortilla. Roll and serve.
- **Add sliced vegetarian hot dogs to vegetarian baked beans.**
- **Tempeh and tofu can be purchased premarinated and need only be baked or sautéed.**
- **Spread bean dip on bread or serve with raw vegetables.**
- **No time to chop vegetables?** Try buying baby carrots;

prewashed lettuce, spinach, or other mixed greens; frozen chopped vegetables; or buy precut, cleaned vegetables from the salad bar.

- **Most fruit need only be washed or peeled and is ready to eat.** Try fresh apples, oranges, peaches, pears, or grapes. Fresh fruit that takes a little more work, such as fresh pineapple, mango, papaya, guava, cantaloupe, or honeydew, can be purchased pre-peeled and chopped. Another easy solution is to buy frozen fruit—then mix it in a blender by itself or with a little soy or rice milk for a delicious fruit smoothie: a healthy alternative to ice cream! Dried fruits are another option requiring no more work than opening the bag.

What to Tell Grandparents, Teachers, Friends, Babysitters . . .

The saying, “Grandma knows best,” may not always apply when it comes to feeding your child. If her idea of a wholesome meal consists of meat, potatoes, and a boiled vegetable, it’s time to have a serious talk. It’s important to discuss with those who may, at some point, be involved with feeding your child. Try these tips:

- **Be specific about the foods your child does not eat—meat, poultry, fish, eggs, dairy, gelatin, and meat broth.** Friends and

family may be unaware of the “hidden” sources of animal products in foods. Providing them with information or a list of foods and snacks that your child eats will help to eliminate uncomfortable situations later.

- **Find common foods and dishes.** Various dishes popular with omnivores and vegetarians alike are free of animal products—pasta with marinara sauce, peanut butter and jelly, and others.

- **Share recipes with family and friends.** When your child attends a birthday party, offer to make a dish or dessert and pass along the recipe.

- **Give a gift subscription to a vegetarian publication or give a vegetarian cookbook.** This will help others understand more about the diet and encourage them to try out some of the recipes.

- **When your child stays with a friend, send along a dish or brown bag meal that your child—and friend—can eat.**

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