



Nutri-Facts Issue #1

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Greetings!

This revised issue of Nutri-Facts focuses on 5 A Day, a national campaign sponsored by the National Cancer Institute and the Produce for Better Health Foundation. September is National 5 A Day month, but I hope that this information will be useful during other times as well. The subject of fruit and vegetable consumption is always a great addition to programs on basic nutrition, weight management, and healthy snacking just to name a few.

This issue includes information on 5 A Day and briefly discusses the health benefits of increasing fruit and vegetable consumption. For clients there is a fact sheet that not only addresses the health benefits of fruits and vegetables but also ways to increase intake. Finally, there is a news release for use in your county newsletters or local papers.

As always, I am open to ideas and suggestions for future issues.

Eat Well!

Prepared by Jenna Anding, PhD, RD, LD, assistant professor and Extension nutrition specialist, 10/1999. Revised January 2004, by Jenna Anding and Anne Newton, Texas A&M University Dietetic Intern.

Agent Information, Nutri-Facts Issue #1

This year, the American Cancer Society projects that more than 1.3 million new cases of cancer will be diagnosed. The causes of cancer are complex but studies suggest that more than one-third of cancer deaths **may** be related to diet. In fact, research has demonstrated an association between increased fruit and vegetable consumption and a reduced risk for oral, larynx, esophagus, stomach, colon, rectum, and lung cancers.

Recognizing their benefits, health agencies and non-profit groups have been encouraging Americans to eat at least 5 servings of fruits and vegetables to help reduce their risk of developing cancer and other chronic diseases. These agencies include the National Cancer Institute, The U.S. Department of Health and Human Services, the U.S. Department of Agriculture, and The Produce for Better Health Foundation.

Why 5 Servings of Fruits and Vegetables?

Five servings of fruits and vegetables each day is the minimum; children, adolescent females, and active women may need at least 7 servings a day while teen boys and active men may need as many as 9 servings a day of fruits and vegetables. The number of servings is based, in part, on calorie needs, although to get the most benefit from fruits and vegetables, research suggests that adults consume about 9 servings a day. This issue of Nutri-Facts focuses on five servings because that is consistent with the Healthy People 2010 goal of increasing fruit and vegetable consumption to 5 servings a day by 75 percent of Americans. Also, since 3 out of every 4 Americans don't reach this goal and about one-third (33%) of adults eat no fruits or vegetables on any given day, aiming for 5 servings is probably more realistic.

Food Phytel!

Eating great tasting food and reducing our risk of developing a chronic disease at the same time. What a great reason for eating more fruits and vegetables! Take a brief look at a few of the nutrients and other components found in fruits and vegetables.

Dietary Fiber

Dietary fiber is the non-digestible or partially digestible material found in plants. Insoluble (also called non-fermentable) fiber may help prevent certain cancers by increasing stool bulk. Not only does this help prevent constipation, but this may also reduce the amount of time our digestive system is exposed to potential cancer-causing agents. Soluble (also called fermentable) fiber can help lower blood cholesterol levels, reducing our risk of heart disease.

What are good sources of dietary fiber? Legumes, peas, oats, apples and oranges are sources of soluble (fermentable) fiber. Whole-wheat products, wheat bran, and many vegetables such as cauliflower and broccoli are sources of insoluble (non-fermentable) fiber.

Vitamin C

Vitamin C acts like an antioxidant, meaning that it prevents certain chemicals from being transformed into active cancer-causing compounds. Antioxidants also protect cells because they can bind themselves to free radicals. Free radicals are normally produced by the body but cigarette smoking and increased exposure to other environmental factors can increase free radical production. This is a concern because in large amounts, free radicals can cause damage to cells in the body. Vitamin E, selenium, and beta-carotene are also antioxidants that help reduce the amounts of free radicals in the body.

What are good sources of vitamin C? Citrus fruits such as oranges, tangerines, and grapefruit, as well as strawberries and dark green vegetables like broccoli and spinach.

Carotenoids

Carotenoids, which include beta-carotene, lycopene, and alpha-carotene, are believed to function as antioxidants. Beta-carotene is a precursor to vitamin A. In some studies, increased intakes of alpha-and beta-carotene have been associated with a reduced risk of developing certain cancers. Increased intakes of lycopene have been associated with a reduced risk of developing prostate cancer.

What are good sources of carotenoids? Alpha-and beta-carotene can be found in carrots, sweet potatoes, tomatoes, spinach, broccoli, cantaloupe, pumpkin, and apricots. However, just because research has shown a possible protective benefit from increased carotenoid consumption, it doesn't mean that a person can put off quitting smoking by eating more carotene-rich foods. In addition, the best way for people to get their beta-carotene is from foods, not supplements. At least two studies have found an increase in lung cancer risk among smokers who were given beta-carotene supplements.

Phytochemicals

Phytochemicals are natural plant compounds that may provide numerous health benefits. The bright colors seen in fruits and vegetables often come from phytochemicals. It is estimated that there are thousands of phytochemicals in plant foods. The chart on the next page is just a sample of the phytochemicals that have been identified.

Phytochemical	Source	How They <u>May</u> Help
Lutein	Spinach, Collard Greens	Promote eye health
Lycopene	Tomatoes, Watermelon, Grapefruit	May reduce risk of some forms of cancer and heart disease
Indoles	Broccoli, Brussels sprouts, Cabbage	May help reduce risk of certain forms of cancer
Anthocyanins	Blueberries, Kiwi, Plums, Cranberries, and Strawberries	May have some anti-aging properties and may help prevent urinary track infections in people who are prone to getting them.
Resveratrol	Red Grapes	May reduce risk of stroke and some forms of cancer
Beta carotene	Carrots, Broccoli, and Sweet Potatoes	May reduce risk of some forms of cancer

Can't remember (or pronounce) these names? Don't worry! With so many different types of phytochemicals, it is easy to forget which fruit or vegetable has what phytochemical. *Don't focus on the names of phytochemicals.* Instead, choose a variety of colorful fruits and vegetables

Five Servings Sounds Like a Lot of Food

Some people panic when they hear five servings but a serving is not that large. According to the Food Guide Pyramid, a serving of fruit or vegetable is equal to: 1 piece of medium-sized fruit, $\frac{1}{2}$ cup of chopped fruit, $\frac{1}{4}$ cup dried fruit, 1 cup of leafy vegetables, or $\frac{1}{2}$ cup cooked fruit or vegetable. For individuals who drink juice, $\frac{3}{4}$ cup of 100% juice also counts as a serving.

Helpful Hints to Increase Fruit and Vegetable Intake

1. Plan meals and snacks to include fruits and vegetables.
2. Add fruit to breakfast cereal or oatmeal (bananas, peaches and strawberries are just a few ideas)
3. If you have a choice between 100% juice or soda, pick the juice.
4. Snack on fresh fruit and vegetables.
5. Open a can of kidney beans, wax beans, chickpeas and green beans and toss with low-fat vinaigrette for a quick bean salad.

6. Add grapes and slices of apples and pears to chicken salad. Brighten up tuna salad with tomatoes, radishes and green peppers.
7. A great topping for broiled meat, chicken or fish is salsa. Each $\frac{1}{2}$ cup portion is equal to a serving of vegetables.

Note to Agents: For more tips on increasing fruit and vegetable intake, check out the BLT *Eat Better to Live Better* lesson on fruits and vegetables.

References:

American Cancer Society, 2004: http://www.cancer.org/docroot/stt/stt_0.asp

Riboli E, Norat T. Epidemiologic evidence of the protective effect of fruit and vegetables on cancer risk. *American Journal of Clinical Nutrition*, 2003; 78(suppl): 559S-569S.

Bendich A. From 1989 to 2001: What have We Learned About the "Biological Actions of Beta Carotene?" *Journal of Nutrition*, 2004; 134:225S-230S.

Bazzano LA, Serdula MK, Liu S. Dietary Intake of Fruits and Vegetables and Risk of Cardiovascular Disease. *Curr Atheroscler Rep*. 2003; 5: 492-499.

Hu FB. Plant-based foods and prevention of cardiovascular disease: an overview. *American Journal of Clinical Nutrition*, 2003; 78(suppl):544S-551S.

For additional information about phytochemicals, recipes and games (for kids), check out the Produce for Better Health Foundation web site at <http://www.5aday.com>

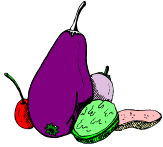
Note to Agents: You may also be interested in the following Extension publications which are available via the TCE Bookstore:

Fresh Fruits: Getting the Most Nutrition for Your Money
<http://tcebookstore.org/pubinfo.cfm?pubid=1227>

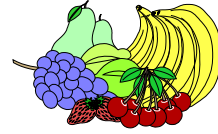
Fresh Vegetables: Getting the Most Nutrition for Your Money
<http://tcebookstore.org/pubinfo.cfm?pubid=1226>

Canned and Frozen Vegetables: Getting the Most Nutrition for Your Money
<http://tcebookstore.org/pubinfo.cfm?pubid=1239>

Legumes - Dried Beans and Peas: Getting the Most Nutrition for Your Money
<http://tcebookstore.org/pubinfo.cfm?pubid=1254>



Get Moving Towards Better Health With 5 A Day



Good News! Nutrition experts want you to eat more - fruits and vegetables that is. Did you know that:

- Americans are 10 times more likely to choose a soft drink instead of 100% juice?
- Americans are 4 times more likely to pick a processed food for a snack instead of a fruit or vegetable?

Along with diets that are rich in whole grains, fruits and vegetables may help promote good health. Unfortunately most Americans aren't getting the fruits and vegetables they need. Keep reading to learn how you can increase your intake of fruits and vegetables.



What is 5 A Day? 5 A Day is a national campaign to get Americans to eat at least 5 servings of fruits and vegetables each day.

What is so nutritious about fruits and vegetables?

Fruits and vegetables are packed with dietary fiber, and vitamins A and C. They are also a source of unique compounds called phytochemicals. Research has shown that fiber, vitamin A, vitamin C along with phytochemicals may reduce our risk of developing chronic diseases such as heart disease and certain forms of cancer.

Five servings sounds like a lot! Not really. Each of the following is equal to 1 serving:

- ✓ 1 piece of medium-sized fruit
- ✓ 1/2 cup of chopped fruit; 1/4 cup dried fruit
- ✓ 3/4 cup (6 ounces) of 100% juice
- ✓ 1/2 cup of cooked fruit or vegetable
- ✓ 1 cup of raw vegetables



Aren't fruits and vegetables expensive? Not when you look at the amount of nutrients you get compared with cookies, chips, or soda. To get the best prices on fruits and vegetables:

- ✓ buy fruits and vegetables in season
- ✓ visit farmer's markets and roadside produce stands
- ✓ use unit prices to help spot the best buys on frozen or canned fruits and vegetables

Which is better: frozen, canned, or fresh? Pick fresh produce when the price and quality are at their best. Otherwise, pick the canned or frozen varieties, which are often just as nutritious.

What kinds of fruits and vegetables should we eat? The bright colors seen in fruits and vegetables often come from the phytochemicals. To get the healthful nutrients and phytochemicals, choose a variety of colorful fruits and vegetables. The more color that you include in your diet, the better!

How can we get more fruits and vegetables in our diets? Follow these tips and you will be on your way to 5 A Day in no time:

- ✓ plan your meals and snacks to include fruits and vegetables
- ✓ start your day with 100% juice
- ✓ add lettuce, tomato and onions to a sandwich
- ✓ brighten up a plain salad with carrots, bell peppers, broccoli and cauliflower
- ✓ add strawberries, peaches, or bananas to your favorite breakfast cereal



News release

February 2004

Most of us are familiar with the old English medical proverb: "An apple a day keeps the doctor away." While the exact origin of this proverb is unclear, the underlying advice is good. "Diets rich in fruits and vegetables can help promote good health and may help prevent chronic diseases, including heart disease and certain forms of cancer," says Jenna Anding, PhD, RD, LD, assistant professor and Extension specialist with Texas Cooperative Extension.

This year, the American Cancer Society estimates that more than 1 million cases of cancer will be diagnosed. Although the causes of cancer are complex, researchers estimate that nearly one-third of all cancer deaths may be related to diet. "And heart disease, which may also be related to diet, continues to be the leading cause of death in the United States," adds Anding.

Numerous research studies have reported the health benefits of a diet that is rich in fruits and vegetables. Currently, experts recommend a total of five servings of fruits and vegetables each day. However, this is a minimum. Children, adolescent females, and active women may need at least 7 servings a day while teen boys and active men may need as many as 9 servings a day. Although the number of servings is based, in part, on calorie needs, to get the most benefit from fruits and vegetables, research suggests that adults consume about 9 servings a day. "Unfortunately most people aren't even meeting the minimum goal," says Anding. This means that many Americans are also missing out on important nutrients such as vitamins A and C. They may also be missing out on a great source of dietary fiber and unique compounds called phytochemicals.

"Phytochemicals are found only in plant foods, including fruits and vegetables" explains Anding. Research on phytochemicals has found that some of them may have significant health benefits. For example lycopene, which is found in tomatoes, grapefruit and watermelon, may help prevent heart disease and prostate cancer. Lutein, found in spinach and collard greens, may promote eye health. Resveratrol, found in red grapes, may help prevent stroke as well as heart disease. And indoles, a group of phytochemicals found in broccoli, Brussels sprouts, and cabbage, may help reduce the risk of certain forms of cancer.

For individuals interested in increasing their intake of fruits and vegetables, Anding has the following advice. "First, plan your meals and snacks to include a variety of colorful fruits and vegetables. That is probably the key step in increasing fruit and vegetable intake." Other tips offered by Anding include:

- start the day with 100% fruit or vegetable juice (a serving is only 6 ounces)
- add vegetables such as lettuce, tomato, or onions to sandwiches
- brighten up a plain salad with carrots, bell peppers, broccoli, and cauliflower
- include strawberries, peaches, or bananas to breakfast cereals

Pick fresh produce when the price and quality are at their best. Otherwise, select canned or frozen varieties which also count towards the 5 a day goal.

For more information about increasing your fruit and vegetable consumption, contact _____, county Extension agent at _____ (phone number).