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INFORMATION

WHY NO VEGETABLE OILS??

Food manufacturers and scientists, as well as most food consumers, proclaim vegetable oils "health food." Yet fat is recognized as a serious health hazard. Could that warning also include vegetable oils? (Vegetable fats are usually referred to as oils because they are typically liquid at room temperature.)

Some vegetable fat must be in your diet. Even though the human body can synthesize most kinds of fat, there are certain fats that are required for growth, maintenance and the proper function of many physiological processes, which cannot be synthesized. These "essential fats" must be in your foods. The requirement for essential fat is lower than 2% of the daily calorie intake; and probably as low as .01% of the calories as essential fat would be adequate for most people. Essential fats are synthesized by plants, not animals; therefore a diet based on plant foods, even those plant foods very low in fat, provides an abundant supply of essential fat to meet human needs. Essential fat deficiency is almost impossible to cause in adults because of the abundant storage of it in their adipose tissues.

Vegetable fats in large doses have medication-like effects. They lower cholesterol and reduce the risk of heart disease by "thinning the blood." Vegetable oils high in omega-3 fats, such as flax seed oil, suppress inflammation associated with arthritis. Keeping in mind the benefits of these oils, carefully consider the overall impact of including significant amounts in your diet.

YOU WEAR THE OILS YOU EAT

Fats are the most concentrated source of energy available to the body, providing approximately 9 calories per gram (compared to 4 calories from a gram of carbohydrate or protein). Because of the high energy yield and almost effortless accumulation, stored body fat serves as the "metabolic dollar" in times of food scarcity.

The expression, "from my lips to my hips" is an accurate description of the ease with which fat from your fork and spoon is transformed into body fat. The cost of moving fat into your fat cells is 3% of the calories. All this transportation is done so efficiently that the original chemical structure of the fat is maintained. (Schafer L. Am J Clin Nutr 52:486, 1990; Thomas L. Am J Clin Nutr 34:877, 1981; London S. Am J Clin Nutr 54:340, 1991*)(Hirsh, Am J Clin Nutr 8:499, 1960).

If samples of your fatty tissues were extracted with a needle for analysis in the laboratory the results would reveal the kinds of fats you usually ate. If you ate margarine or shortening then the fat chemical structure would be predominately "trans" fats, the same as in the original foodstuff. A diet high in fish fat would cause your fat cells to be filled with fats with an Omega-3

structure.

Men fed a diet high in polyunsaturated fat in an attempt to prevent heart disease showed a rise in the essential vegetable fat, linoleic acid, in their adipose (fat) tissues from 11 percent to 32 percent in 5 years (Dayton. Lipid Res 7:103, 1966). Because the dietary fats are primarily from animals, people in the United States have a higher proportion of saturated fats, and lower levels of unsaturated fats in their adipose tissues than people living in Japan where the diet is lower in animal fat and higher in vegetable fat (Insull. J Clin Invest 48:1313, 1969).

Only a few portions of fatty foods are required to add a pound of disgusting fat to your abdomen, hips, or thighs. For example, only 3 1/2 ounces of bacon each morning for one week; or 1/2 cup of olive oil in soups and stews daily for a week; or 1 tablespoon of butter spread on your sandwich every lunch for a month; or 1 tablespoon of safflower oil to grease a pan each day for one month, would add one pound of fat to your body.

OILS PROMOTE CANCER

Worldwide, the risk of breast, colon, prostate, and kidney cancers is directly correlated with **total** fat intake (Hursting S. Prev Med 19:242, 1990). (The cancer link is greater for total fat than animal and vegetable alone.) Animal experiments started in the 1930s consistently show fat encourages cancer growth, and vegetable fat is a stronger promoter of cancer than animal fat (Hopkins G. JNCI 60, 849, 1978; Nishizuka Y. Prev Med 7:218, 1978; Broitman S. Cancer 40:2455, 1977). Processed vegetable fats (margarines, shortenings) may be the worst of the vegetable oils when it comes to cancer (Enig M. Fed Proc 37:2216, 1976).

Fats may promote the development of hormone dependent cancers (breast, prostate, and uterus) by increasing the levels of reproductive hormones in the body or by altering the body's responsiveness to these hormones (Dao T. Environ Health Prospect 50:219, 1983; Oyaizu N. Jpn J Cancer Res 76:676, 1985). Suppression of the immune system also plays an important role in the development of cancer. Diets high in vegetable oils are much more immunosuppressive, and, therefore, more potent promoters of cancer growth than diets high in animal fats (Vitale J. Cancer Res 41:3706, 1981). Vegetable oils also seem to favor the spread of cancer (metastasis) more than animal fats (Scholar E. Nutr Cancer 12:109, 1989).

Even though cancer grows less successfully on diets consisting only of animal fat, when a small amount of vegetable oil is added to the high animal fat diet, then the tumors grow just as well as on the all vegetable oil diet (Carroll K. Lipids 14:155, 1978). Apparently, a small amount of vegetable oil is required for cancer growth. All natural human diets have this minimum amount of vegetable fat, therefore *total fat* in the diet will be the most telling factor for a populations risk of cancer.

This animal experiment demonstrates the relative cancer promoting effects of various vegetable oils by the number of tumors produced in groups of 30 rats (Carroll K. Cancer Res 35:3374, 1975)

OIL	TUMORS/RAT GROUP
Sunflower seed Oil Cottonseed Oil Olive Oil Corn Oil Soybean Oil	130 127 117 110 103
Lard Butter Tallow	97 88 72
Coconut	7
Low-Fat Control	75

VEGETABLE OILS INJURE ARTERIES

The Cholesterol Lowering Atherosclerosis Study demonstrated that each increase in level of consumption of total fat and polyunsaturated fat was associated with a significant increase in new atherosclerotic lesions on angiograms performed 2 years apart (Blankenhorn D. JAMA 263:1646, 1990). This study of 188 non-smoking men who had undergone bypass surgery and thus had extensive atherosclerosis (hardening of the arteries) showed disease progression was not stopped by changing from saturated fat to polyunsaturated (like corn and safflower oil) or monounsaturated (olive oil) fat. Only those men who followed a diet low in fat and high in carbohydrate stopped the development of new lesions in their artery walls. Other research explains how vegetable oils promote atherosclerosis by causing injury to the cells of the artery walls (Hennig B, Am J Clin Nutr 49:301, 1989).

MORE DAMAGE FROM VEGETABLE OILS

Vegetable oils enter the blood stream and coat the blood cells, causing them to clump together; thereby decreasing the circulation to the tissues (Friedman M. JAMA 193:110, 1965). Platelet function is decreased by these oils, increasing the tendency for serious bleeding in the event of an accident. They increase the excretion of cholesterol through the gallbladder, increasing the risk of gallstone formation (Sturdevant R. N Engl J Med 288:24, 1973. They are potent suppressors of the immune system which may lead to a greater risk of cancer and infections. Like all other fats in the diet, vegetable oils are deposited on the skin causing oily skin and hair, often feeding pimples

RESEARCH

CARBOHYDRATE SATISFIES HUNGER

Dietary Fat and the Control of Energy Intake: Evaluating the Effects of Fat on Meal Size and Postmeal Satiety by John Blundell in the May 1993 supplemental issue of the American

Journal of Clinical Nutrition demonstrated the inability of fat to satisfy the hunger drive (57 suppl:772S, 1993). In the first experiments, sixteen lean, healthy men consumed a 440 calorie breakfast supplemented either with fat (vegetable oil or cream) or carbohydrate (sugar). Carbohydrate suppressed ratings of hunger and the desire to eat, and produced high ratings of fullness; whereas fat provided none of these feelings. The satisfying effects of carbohydrate lasted up to 4 hours. The authors deduced, "the rapid digestion of carbohydrate would lead to a prompt rise in blood glucose (sugar) concentration and hence initiate the postabsorptive phase of satiety. The slower physiological processing of fat would not promote such action."

In a second phase of this research 12 obese women were allowed to eat as much as they wanted at dinner of either high fat (50% fat) or high carbohydrate (50% carbohydrate) foods. When choosing the high fat meals they consumed an average of 1336 calories. With the high carbohydrate dinner they took in only half the calories, 677 calories. The next day those who had the high fat dinner continued to consume more calories (1800) compared to those fed the high carbohydrate dinner (1556).

COMMENTS: Obesity effects more than 40% of adults in our country, and the incidence is growing. Attempts to undereat (diet) to solve the problem are almost always met with failure. In fact, undereating promotes overeating and greater efficiency of the metabolism to store more fat in preparation for the next famine (period of undereating).

Many authorities blame the hunger drive for overeating. The truth is the hunger drive is functioning properly; but the fuel is wrong. When fat is consumed the body hardly notices it and simply directs it to the fat storage areas. The body is very aware of the intake of carbohydrate and regulates present and future intakes of food based upon the amount consumed of this specific fuel.

People who believe they are not in control of their hunger drive are simply experiencing the effects of not eating enough of the substance the body is seeking. You will be able to "cure" years of compulsive overeating behavior the day you start giving your body sufficient amounts of appetite-satisfying, carbohydrate-containing, foods.

GOOD NEWS ABOUT BAD HABITS

When articles support profits of industry and, better yet, our bad habits, they get extraordinary publicity. Dietary Fat and Fiber in Relation to Risk of Cancer by Walter Willett published in the October 1992 issue of the Journal of the American Medical Association showed no relationship of fat consumption in American women and their risk of developing breast cancer (JAMA 268:2037). Even though this is old news, newspaper articles continue to republish the findings; for example the Sacramento Bee newspaper carried an article April 24, 1993 titled: "Evidence seems thin to link fat, breast cancer." Why so much attention for a study that contradicts the bulk of the scientific evidence?

Worldwide there is a strong association between the fat intake in

a country and the risk of women getting breast cancer (JAMA 268:2080, 1993). Migrants from low- to high-risk countries demonstrate a substantial increase in risk of breast cancer which correlates with their increase in fat intake. At least 11 of the 16 case-control studies comparing the diets of women with and without breast cancer and their fat intake show a positive correlation. Animal studies comparing cancer promotion by various diets consistently find dietary fat to be involved in the development of breast cancer. Five studies of populations of people and breast cancer have been done, and 3 of these show a positive association of breast cancer and fat. Dr. Willett's is one of the two that does not.

After a thorough review of all of the available evidence national health organizations have concluded there is a causal relationship between dietary fat and breast cancer. These scientific bodies include, The Senate Select Committee on Nutrition (1977); The National Cancer Institute (1979), The National Academy of Sciences (1982); The American Cancer Society (1984); and The Surgeon General (1988). So why did Dr. Willet's study fail to support the link?

The most important reason is all of the women in his study ate the American diet with insignificant variations. Some may have eaten a lower fat (higher protein) version, but the meals still consisted mostly of meats, dairy, and vegetable oils; and were low in starches, vegetables, and fruits. As a result, the lower-fat version of the American diet still favors cancer development and growth. Protein, especially animal protein, has been shown to suppress the immune system and promote cancer. Vegetable foodstuffs have many components that help our bodies defend against cancer; such as dietary fiber, phytates, vitamins, minerals, phytoestrogens, and many other compounds with antioxidant and anticarcinogenic activities.

The women in the low-fat category in Dr. Willett's study still consumed about 25% of their calories as fat. This fat level is probably all that is necessary to put a woman at high risk for breast cancer. Worldwide population studies show the less fat consumed the less breast cancer with no cut off threshold. One important example of this is from the China Study by T. Colin Campbell--the breast cancer incidence is found directly correlated with fat intake from 28% to 7% fat--with the only safe threshold being the lowest level of 7% fat (The McDougall Program diet is about 5% fat).

From these findings you should conclude that both the higher-fat and lower-fat versions of the American diet are unhealthy and promote cancer. There is little advantage of switching to skinned-chicken, turkey and low-fat dairy products. To protect you and your family from breast, colon, and prostate cancer, heart disease, diabetes, hypertension, and obesity you need to eat diet similar to populations of people living without these diseases--the best examples are diets of those living in Asian or African countries.

Obviously, moderation should not be your goal. The American Cancer Society says cut your fat to 30%--Dr. Willett's study proves this will do little or no good. Instead, a starch-based diet provides you with the ideal amount of fat, and scads of cancer fighting vegetable-derived compounds.

RECIPES

BROCCOLI "CHEESE" SAUCE

SERVINGS: 6 CUPS SAUCE PREPARATION TIME: 30 MINUTES COOKING TIME: 25 MINUTES

3/4 cup peeled, chopped potato
4 cups water
1 (7 oz.) jar chopped pimientos
1/2 cup brewer's yeast flakes
1/3 cup cornstarch
1/4 cup lemon juice
1 teaspoon onion powder
1 teaspoon salt (optional)
6 cups chopped broccoli

Place the potato in a saucepan with 1 cup of the water. Bring to a boil and cook until tender, about 15 minutes. Pour into a blender jar and process until smooth. Add 1 more cup of water and the remaining ingredients, except for the last 2 cups of water and the broccoli. Blend until smooth. Pour into a saucepan and mix well with the remaining 2 cups of water.

Meanwhile, steam broccoli until tender, about 10 minutes. Drain well.

Cook the sauce mixture over medium heat, stirring constantly until thickened, about 5-6 minutes.

Place the drained broccoli into a bowl and pour the sauce over the broccoli, mixing gently.

Serve over baked potatoes.

GARDEN PASTA SALAD

SERVINGS: 8-10 PREPARATION TIME: 30 MINUTES COOKING TIME: 10 MINUTES CHILL TIME: 2 HOURS

1 10-12 oz. package rainbow pasta 1 cup chopped broccoli 1 cup chopped cauliflower 1 cup fresh snow pea pods, trimmed 1 cup sliced fresh mushrooms 3 scallions, sliced thinly 1 (2 oz.) jar chopped pimentos 3/4 cup cherry tomatoes, cut in half 3/4 to 1 cup oil-free Italian dressing fresh ground black pepper to taste

Bring 4 quarts water to a boil, add pasta, return to boiling and cook uncovered for 6 minutes. Drain. Rinse under cool water and set aside.

Place broccoli, cauliflower and snow peas in a steamer basket. Steam over boiling water for 4-5 minutes, until crisp-tender.

Combine all the ingredients in a large bowl. Toss to mix well.

Refrigerate at least 2 hours before servings.

CAJUN VEGETABLE SAUCE

SERVINGS: 6

PREPARATION TIME: 20 MINUTES COOKING TIME: 22 MINUTES

1/2 cup water
1 round onion, coarsely chopped
1/2 lb mushrooms, cleaned and sliced
2 cups broccoli flowerets
2 small zucchini, sliced
1 small yellow crookneck squash, sliced
2 (15 oz.) cans stewed tomatoes
1 (15 oz.) can chunky tomato sauce
1/4 cup chopped fresh parsley
2 teaspoons finely chopped fresh basil
1/2 teaspoon Cajun Spices (recipe follows)
1/2 teaspoon Louisiana Hot Sauce

Place the water, onions and mushrooms in a large Wok or pot. Cook over medium heat for 3 minutes, stirring frequently. Add broccoli, continue to cook and stir for 2 minutes. Add zucchini and squash, cook and stir for 2 more minutes. Add remaining ingredients. Cover and cook over low heat for 15 minutes.

Serve over pasta, whole grains or potatoes.

Hint: In place of the stewed tomatoes, try using the new Cajun Style stewed tomatoes.

Cajun Spices:

3 tablespoons paprika

2 teaspoons onion powder

2 teaspoons ground black pepper

2 teaspoons ground white pepper

2 teaspoons ground red pepper

1 teaspoon ground oregano

1 teaspoon ground thyme

1/2 teaspoon celery seed

Mix all ingredients and store in tightly covered container.

100% STONED GROUND WHOLE WHEAT BREAD

(RECIPE FOR HITACHI AUTOMATIC BREAD MACHINE)

SERVINGS: 1 LOAF

PREPARATION TIME: 20 MINUTES COOKING TIME: 4 HOURS 10 MINUTES

3 level cups of 100% whole wheat flour 3/8 level cup of wheat gluten flour 1 1/2 cups water at 110 degrees

3 tablespoons honey

4 teaspoons dry active yeast

2 heaping teaspoons salt

Mix in separate bowl, flour, gluten flour and salt.

Pour water into bread pan. It is important to use thermometer and that the water be 110 degrees. Sprinkle yeast into the water. Stir with wooden spoon until yeast is thoroughly dissolved. Add

honey. Stir with wooden spoon until honey is thoroughly dissolved. Add flour mixture. Gently stir in each corner of pan to help mix mixture. Place container in bread machine. Put on Bread menu. Push start and lock buttons. (Medium or light crust). Bread freezes well.

This recipe was developed by Marylyn Spomer for the Hitachi Home Bread Machine and sold to the Hitachi Corporation. Permission was granted by Mr. Bob Sisco of Hitachi Corporation to print this recipe.

HELP

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