



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
2002 Volume V: Food, Environmental Quality and Health

For Optimum Health: Revising the Food Pyramid

Curriculum Unit 02.05.10
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The purpose of this unit is to change your way of thinking. It will concentrate on health, diet, and nutrition, in light of the USDA Food Pyramid. I think it's not designed to produce healthy human beings, but may, in fact, do just the opposite. As a result of much research and personal experience I have come up with the perfect Food Pyramid for Optimum Health. But you be the judge. Be sure you read all that is written here, do the research in light the information presented, then give it a fair assessment after actively applying the principles and guidelines in your own diet. Give it at least one (1) to three (3) months following the plan precisely, then see if you feel this plan is worth presenting to our next generation of adults, your students. This may affect how you and your students see the School Breakfasts and Lunches as well. Hopefully, you will recognize the obvious need for change.

There is something very wrong here. Even the young people realize there is something wrong with the world. Not only do the buses crashing, child snatchings, drugs, illicit sex, and misuse of alcohol have their attention, but the growing occurrences of diseases, obesity, and death as well. Practical approaches to resolving the problems of the latter group can be more easily adopted by the students if they are presented to them while they are practiced and modeled by us.

The content of this unit applies to all who hunger and thirst for the knowledge of a way to correct the erroneous health habits and to teach the same to others. No particular race, religion, creed, gender, or age should be excluded from the benefits within these pages. The foundation of this school of thought is presented metaphorically. The young and old alike can relate to this method of presentation. I have directed the information to fit young people from grades five (5) - ten (10). It should take approximately one (1) - two (2) months to complete.

Building Background

Explain to the students that the unit, For Optimum Health: Revising the Food Pyramid, is about changing food habits and improving overall health. Let them know that they may be able to get the school system to improve the current lunch program. This should motivate them to listen. Tell them that this concept may be

different from any they have ever heard, but that they should give it a chance there is so much to learn.

Invite your students to help you start a chart on the board that shows what they already know about the food groups and of what value they are to good health. Explain that they will complete the chart after they finish this unit. They should make a copy of the chart in a notebook they can purchase just for this unit. The chart may resemble the following:

(chart available in print form)

Vocabulary Strategies

Key Terms and definitions

calories- unit of heat or of energy got from food

impoverished- make poor

abstemiousness- not eating or drinking too much

hereditary - from parents, grandparents, or great grand parents; not one's own fault

communicative - as a result of some communication, direct or indirect

acquired - self-created

organic- not treated with chemicals

inorganic- not living; not animal or vegetable

disease- illness

constipation- make it difficult to move the bowels

genetically engineered -- the largest food experiment in the history of the world

EPA - Environmental Protection Agency

WHO - World Health Organization

FDA - Food and Drug Administration

immune system- protects against something bad, as a disease

pesticides - chemicals used to get rid of or prevent insect infestation

USDA- United States Dept. of Agriculture

food pyramids -- USDA's answer to balancing diet of human beings

CPSC - Consumer Products Safety Commission

proteins- nitrogenous substance essential to diet

carbohydrates- compound of carbon, hydrogen, and oxygen, as sugar or starch

fats- oily animal substance

Check students understanding

To check students' understanding of the Key Terms, have them get into groups of three and let each group form webs using terms from the list. For instance,

Constipation

*Clogged system *improper foods *waste matter

Be sure all the terms are webbed. May give each group three terms. Make sure each group gets at least one of the abbreviations (EWG, FDA, etc.).

Strategies for Reading

Make a copy of the following reading material "For Optimum Health: Revising the Food Pyramid," for each student. Have them read the **first** paragraph then ask them what do they think they will learn from this reading? Have them write a short, four to six sentence paragraph answering that question. Then read the passage out loud. If you have good readers, have them take turns reading paragraphs up to the first lesson. (Don't copy the lessons for the students. They are for you.) Be sure to copy all the other material for the students. They should find it interesting in informative.

Reading Material

For Optimum Health: Revising the Food Pyramid

“Disease has been identified in three different categories --hereditary, communicative, and self -- created (acquired).”(Houteff 8) In this unit I will only deal with the self-created (acquired) diseases. These are the diseases that are not inherited, are a result of violating the laws of health. (Houteff 9)

“The wise will therefore correct their habits of living $\frac{1}{4}$ and if there is a cure at all, they will have it. “ (Houteff 9)

Lessons from the Modern Machine (quoted)

“One must realize that the human body is in some respects similar to a man-made machine. When the gas tank of a car goes empty, the engine immediately stops. The same law operates within the human body: When the body runs out of energy (starves, runs out of calories), it stops running and dies; and although man, who made the car, can refill its tank with fuel and put it to running again, he cannot do so with the human body. Once the heart stops beating, at that very moment life ceases and the body lies down until the One who created it starts it moving again.”

“When the crankcase of an engine becomes empty, but the engine continues running, then the machine breaks down and its usefulness ends. And as the life of a car is maintained by reducing the friction through means of lubrication, the life of a human being is kept up by Nature’s replacing the worn-out cells after the day’s task is done, while he takes rest in bed. Thus is he able to arise in the morning with renewed strength. But if he fails to provide the material which Nature needs in order to rebuild the worn-out cells and tissues, he, of course, suffers the consequences, as does the neglectful person who fails to drink enough water during the day (six to eight glasses), his blood will become impoverished and his system stagnant and clogged with waste material, ferments and decays. Too, if Nature is deprived of energy by which to throw off the toxins through the pores, kidneys, and the bowels, or to raise fever and endure the burning process of the wastes, then there is nothing to do but to give up trying-decease.”

“It is therefore necessary that Nature be well supplied with all the essentials (“Pure air, sunlight, abstemiousness, exercise, rest, proper diet, the use of water, trust in divine Power.” --MH 127:2) if one expects to maintain his usefulness unimpaired and to live his allotted life.”

“Moreover, no good engineer puts useless or needless parts into an engine, and if the user of it takes out any part, regardless how small and insignificant, the engine is made just that much less efficient. The same is true with the human body: Though the engineer can replace the missing parts in the machine which he designed and built, the surgeon cannot easily replace the body organs which his patient may cause him to remove. For example, one may remove only a setscrew from a machine and not affect its performance for the time being. At length, however, he will find that the machine fails to perform, and if he cannot replace the part, which he has taken out, the machine will become altogether useless. The same thing occurs, more or less, when one removes an organ from his body.” (Houteff 10,11)

Lessons From Nature (quoted)

Since the well being of the body is even more accurately taught by Mother Nature herself, no one who wishes to enjoy life dares overlook her counsel. Plants never do well in soil that is deficient or depleted of its life-giving properties. Some plants do better in one soil or climate than do others. Some thrive in higher altitudes and others in lower. The same law seems to operate in mankind: The darker races fare better in the torrid regions and the lighter in the frigid regions.

While plant life subsists on inorganic matter, animal life subsists on organic. Moreover, as plant life was created before animal life, the truth is that the plant kingdom can get along without the animal, but the animal kingdom cannot get along without the plant. Thus it is that vegetation needs only Mother Earth, but man needs both the earth and the plant. In other words, plant life is dependent on the soil for existence, while animal life is dependent on vegetation. A flesh diet is therefore artificial and thus deficient -- incapable of maintaining life.

So, just as plants cannot thrive in poor soil, men cannot thrive on a poor diet. And if one is aware of the fact that almost immediately after the soil is enriched, the plant awakens with health and vigor, then he will have no difficulty realizing that as soon as he corrects his own diet, his health will likewise spring up. Is it not true, then, that one's health depends on the food he uses, as does the plant's on the soil in which it feeds?

If the sufferer's faulty diet is the cause of his ailment, and in most cases in our day it is, then no kind or amount of drug can cure him. Yet when something goes wrong with one's organism, he generally runs to a doctor, not to find and to remove the cause, but to be cured while the cause remains and brings him closer and closer to the grave! Why not check up on your daily diet and habits of living? Why take drugs when you need to take water, fresh air, sunshine, the right kinds of food, and exercise, or perhaps to clean up your home, your body, and your surroundings?

Let it now be understood that anyone living on a poor diet, or in unpleasant surroundings and unsanitary conditions, is subject to disease in one form or another, just as is a plant that is planted in poor soil and uncondusive surroundings. Then, too, one must remember that unbalanced food, regardless of quality or quantity, is poor food; and as too much fertilizer kills the plant, so too much food kills the man. Too much of anything is as bad as is too little. Illness, therefore, is only a warning of one's improper habits of living. But alas, who can understand! and who is taking heed!

What else can the cause of diseases that are not hereditary or communicative be but wrong living -- malnutrition, "unclean" flesh foods (Lev. 11), overeating, poor elimination, insufficient exercise, lack of sunshine and fresh air, living in filth, neglecting to drink enough water between meals, or perhaps smoking or chewing tobacco, habitually using coffee, tea, or some other stimulant that whips up the body to the last ounce of energy? To be sure, such diseases as cancer are the result of wrong living...

Nature teaches that if a tree becomes sickly from within rather than from without, then to spray it with any kind of drug will only hasten its death, waste the drug, time, and one's energy. The human body is no exception. If the disease is from internal causes, then what good will it do to try to remove it by the use of drugs? In such cases drugs will not remove the cause, but rather do greater harm and hasten the end.

If it is not possible to keep a water-cooled engine from overheating when the radiator is empty, an if nothing

but filling the radiator with water will cure the trouble, then why should it be possible to cure a diseased body without curing the cause? Stop and think! True, many do suffer from hereditary and contagious diseases, but most persons suffer from diseases caused by erroneous habits of living. Alcoholic beverages and other stimulants, rich pastries, commercial sweets, overeating, wrong combinations, and too many grain products -- any one or all of these collectively have more or less afflicted every human being of this age with one ailment or another.

Constipation is one of the commonest diseases that one brings upon himself by erroneous eating. And constipation in itself is a cause of a number of diseases, as is malassimilation. Man is not naturally subject to constipation - no, not any more than is a water main subject to plugging up if nothing but water, the only thing the manufacturer ever intended should be put through it, is put through it." (Houteff 12,13)

It would be good if physicians knew how to diagnose true constipation and could advise their patients in the proper way to cure it but most of them don't. About seven (7) years ago I had this terrific pain in my side for about two (2) days. I took hot baths, used hot water bottles on that area, used cold packs too, but nothing helped. I walked a couple of miles around a local track and tried to do stretches. None of this seemed to help and it started to effect my sleeping at night. Finally, in the event something was really wrong, I decided to go to my doctor who arranged for me to have an x-ray. According to the x-ray I had some inflammation so they prescribed an anti-inflammatory pill/drug to me. They had some free samples on hand so I accepted them but I would use them. I called some Naturopathic physicians in Alabama and told them the entire situation and what I had done thus far. They immediately told me that it sounded like I may have been constipated. I was sure that could not have been it because I went at least once a day, but I purchased the herb they suggested anyway. Because they said there was no side effect and I was still in great pain, I took the 3 capsules before I went to bed that evening. Early the next morning I ran to the bathroom and after relieving myself, in a big way, I realized the naturopaths were right. They also told me of the side effects of the anti-inflammatory pill I could have taken. Imagine that! The pill would not have taken care of the problem and would have added a side effect. I haven't had a pain like that since because I made it my business to study what to and what not to put in my body. Realizing that we should have a bowel movement for every meal we eat was a shocker to me also. How many doctors have told you that?

"That commercially prepared foods, too, are among the many causes of constipation, a faculty member of a certain health institute endorses: "Because of our civilized foods and the way they fill the bowel with toxic materials and gas, it is absolutely necessary to give oneself a series of colonic irrigations at least twice a year in order to stay well. Headaches, colds, flu, intestinal pains, mucous, gas, and many disturbing disorders disappear after one or two colon treatments." (Houteff 11-13)

" ...Rather than resort to artificial means for cleansing now and then, why not eat the right kind of food -- the kind that keeps the bowels clean every day of the year? Moreover, a balanced diet will not only keep the bowels free from "toxic materials and gas" but will supply the entire system with the necessary minerals and vitamins, without which no one can keep well any considerable length of time. Then why spend your money on manufactured vitamins and devitalized foods at sky high prices when you can have Nature's own, full of vitality, and at prices as low as gravity? Ever remember that artificial nutritives are no better than artificial arms or legs.

Since, at the present time, when the soil is so devitalized, when foods are grown with chemical fertilizers and sprays, and when the processed foods have so many additives and preservatives, unless one can eat only organically grown and wholesomely prepared foods, it is becoming necessary to use some extra food

supplements (vitamins, minerals, herbs) to augment the food loss we have today.” (Houteff 13)

What Should a Flesh Eater Know? (quoted)

The ox, as we know, is able to maintain vigorous strength and perfect on an average of 20% grain and 80% grass, without the use of flesh. The elephant on even less grain maintains good health, gains gigantic strength, and reaches great age. On the other hand, the dog, though carnivorous, cannot maintain good health on flesh alone. Merely by instinct he knows that he has to help himself to grain and to some grass, too. The herbivorous animal never even tastes flesh. These facts prove that a balanced vegetarian diet is complete in itself, but a flesh diet is never complete alone. The only animal that can get by fairly well on flesh, though not altogether, is the one which eats the whole, hide, hair, bones, hoofs, flesh, and all. Man’s intelligence concerning his body’s needs has degenerated lower than that of the dumb animals!” (Houteff 16)

Lesson #1 Food Chains

Purpose:The purpose of this lesson is to follow the food chains of flesh eaters that man uses for food (tuna) and non-flesh eaters that man uses for food (cow).

Objective: Students will discover that flesh foods are eaten more because they taste good and are conveniently prepared, than for their nutritional value.

Students will discover that at the bottom of every food chain is a plant.

Students will discover that when cows are given something (cow flesh) not a part of their natural food chain they get sick (mad cow disease).

Materials: Encyclopedias, list of Flesh (meats) that people eat, construction paper, notebook, pencil, Magic School Bus Video (Food Chains), nutrition/vitamin and mineral charts, sequence graphic organizers, old magazines with food and or animals in them, scissors, glue

Procedure:

1. The students will brainstorm the Flesh meats they eat or have heard about people eating. This includes Fish. A student will write the list on the board.
2. Students will get into groups of three or four and research the food chain for each choice.
3. Each group will have a sequence chart for each meat researched.
4. Then the magazines can be used to make visual food chains. Find the animal or draw it at the top of a sequence chart your group will make out of construction paper. Be sure to draw or find the food for each level in the food in the chain and place it in its proper order. (It may be flesh or plant)

Conclusion:

1. What did you find?
2. What is at the bottom of all food chains?
3. What is at the top of these?
4. Do we have to eat the flesh to get to these nutrients/proteins?
5. What alternative ways can we get them?
6. Why do we eat the flesh meats?

What Should a Vegetarian Know? (quoted)

With a reasonable variety of fresh vegetables, legumes, grains, nuts, and fruits, also the equivalents to milk and eggs, the vegetarian can easily balance his diet to supply all his body's needs. He should therefore not neglect to include in his diet as wide as possible a variety of such foods, both cooked and raw, remembering that the latter are even more essential and more complete.

If we plan wisely, that which is most conducive to health can be secured in almost every land. The various preparations of rice, wheat, corn, and oats are sent abroad everywhere, also beans, peas, and lentils. These, with native or imported fruits, and the variety of vegetables that grow in each locality, give an opportunity to select a diet that is complete without the use of flesh meats or milk and eggs. MH 299:2

Why is it, though, that some strict vegetarians, rather than improving their health and building up resistance against disease, often suffer from malnutrition and become even more susceptible to various physical ailments than before they gave up flesh foods? Because in most cases flesh food is discarded without supplementing the diet with a satisfactory substitute. Many have the mistaken idea that by merely increasing their intake of protein foods -- nuts, legumes, and grains, they adequately replace the deficiency. By so doing they do not at all replace the deficiency, but instead unbalance the nutrients. Ever remember that flesh is composed of about 80% grass and 20% grain. Biological experiments unmistakably demonstrate that animals cannot thrive on whole grain proteins divorced from the associated leafy plants. The health seeker must bear in mind that often the immediate result of an unbalanced diet is constipation, followed by rheumatism or arthritis, if not by other even more dreadful and destructive diseases. Balance your diet and Nature will take care of the rest.

The truth that the substances in superior quality flesh are derived from grain and grass, approximately 20% of the former and 80% of the latter, plainly demonstrates that flesh is adequately substituted only by the proportionate use of both grain and leafy plants. Be not misled. Your body needs both grain and vegetable

proteins in exactly these proportions. Indeed, they are all essential, and man's constitution demands that for health and longevity there be neither a missing link nor a weak one in the chain of nutrients."(Houteff 18)

"...These necessary nutrients are scattered and scientifically proportioned throughout the earth. The essential bodybuilding and up keeping materials have been carefully distributed throughout the food kingdom. They are not all placed in one plant.

To maintain perfect health, therefore, be sure to make use of all the twelve types of foods grouped below, and give them the proper proportions in your diet. Approximately 80% of your diet should consist of the first seven classes of foods (Group 1), and 20% of the second three classes of foods (Group 2). The last two classes of foods (Group 3) are seasonings for all foods

Group 1

Eighty Percent of the Diet

Eighty percent (80%) of one's diet should consist of the foods in this group:

1st -- Leaves (watercress, beet tops, spinach, lettuce, parsley, cabbage, broccoli, cauliflower, chard, etc.)

2nd -- Stalks (celery, rhubarb, asparagus, etc.)

3rd - Herbal Fruit (pineapple, okra, eggplant, peppers, string beans, tomatoes, etc.)

4th - Tubers (carrots, potatoes, radishes, onions, yams, beets, turnips, etc.)

5th - Cucurbits (squash, melons, cucumbers, pumpkins, etc.)

6th - Tree Fruits (peaches, dates, bananas, oranges, pomegranates, olives, avocados, etc.)

7th - Vine Fruits (berries, grapes, etc.)

Group 2

Twenty percent (20%) of the Diet

Only about 20% of one's diet should be made up of the foods in this group:

1st - Grains (oats, rice, corn, rye, wheat, barley, etc.)

2nd - Legumes (beans, lentils, peas, etc.)

3rd - Nuts (pecans, coconuts, almonds, walnuts, chestnuts, etc.)

Group 3

Seasonings for All Foods

All foods may be seasoned with the foods of this group (but used sparingly):

1st - Oils (olive oil, soybean oil, sesame oil, nut oils, etc.)

2nd - Sweets (honey, raw sugar, maple sugar, sorghum, etc.)" (Houteff 18,19)

At this point let's consider the USDA Food Pyramid that is currently used in the United States. It is posted on many food boxes and periodicals on a regular basis. If what has been compiled and written in this unit is correct, and I believe it is, then our society is set up for failure, in the area of health. There is a definite imbalance.

Italian Food Pyramid

(figure available in print form)

Way too much grains is what we see. They should be pushed to the top of the pyramid. And for those who insist on being flesh eaters (fish, poultry, beef, etc), those foods should be put in that 20% category, at the top, as well. The Fruits and Vegetables, on the other hand, should be on the bottom making up the 80%. All of these that can be eaten RAW should be eaten that way. This way they maintain more of their nutritional value.

It seems that every food group is pushing to show how man can't get along without its particular foods. Everybody needs MILK! Pork, the OTHER white MEAT! Beef, it's what's for dinner tonight! And let us not forget the countless cereal commercials and all the little toys and gadgets your children can get FREE if they buy this or that nutritious (OK?) cereal. Even one of our former presidents publicly said he did not like broccoli. Who really cares about his personal likes and dislikes especially when it comes to healthy foods. How much more difficult did he make it for a parent trying to get his or her child to eat that vegetable or any other vegetable for that matter? President so-and-so does not like it and he became the President. Do you see the direction we are heading in and have been heading in for many, many years? Perhaps you yourself as an educator have echoed things same type of sentiments as well. I do not like this. It does not taste good (something known to be good for you) or I am still going to eat this or that because it tastes good (something that may have been proven or logically shown to be not good for you).

Poor children! Are you, as an educator, going to tell your own children or your school children it's OK to eat only the things they like especially since they TASTE SO DARN GOOD? Look at yourself. Consider your ailments over the years. Lack of energy, high blood pressure, cancers, anemia, overweight, underweight, frequent colds, sinus problems, arthritis, eczema, smoking, drinking, gas, indigestion, and anything else you have to take a prescription or over the counter remedy for, is a consequence of your dietary choice. You say it has worked all right for you all these years. Well, think again! Do you make wise, nutritious snack and meal choices? Or do you eat the same chips, candy, pork rinds, donuts, sugar water (kool-aids), coffees (stimulants), and other unhealthful items just like or children/students? Are drinking 6-8 glasses of water each day? The purpose of this unit is to help students to make well-informed choices. They have always had the OTHER information, the meat and potato idea. So now let's give a fair hearing to the fruit, nuts, vegetables, and grains solution, without the meat eater's prejudice. McDonald's, Burger King, KFC, Popeye's, Wendy's, Subway, all flesh eater Paradises.

Lesson # 2 Food Pyramids Comparison

Purpose: Students will compare what the country says is the right foods and proportions to eat to a more Vegan based explanation of the same.

Objective: To have students Develop a food pyramid that promotes Optimum Health based on the information in the unit thus far, the 80% & 20%.

To have Students Compare the Developed pyramid to the Standard one using a 2- circle Venn Diagram

To have the students recognize that the Food Pyramids of different cultures shown on the website <http://www.semda.org/info/> are the same amounts proportions as all the others just the different cultural foods are substituted To have Students Develop a pyramid for their own personal use and compare it to the other two, using a 3 circle Venn Diagram

Materials: Venn Diagrams (2 circles & 3 circles), Standard Food Pyramids, construction paper, crayons, markers, pencils, copies of the expository pieces Lessons from the Modern Machine, Lessons from Nature, What Flesh Eaters Should Know, What Vegetarians Should Know, 80%/20% Pyramid (see attached)

Procedure: 1. Students should work in groups of 3. Using the four expository pieces, they should draw a Pyramid and label it according to the information given.

2. Each group will have a standard pyramid, and a 2 circle Venn Diagram. This should be used to compare and contrast the 2 pyramids.

3. Each student will create a healthy food pyramid of the things they know they do and/or will eat themselves to improve the balance and variety in their own diet. (This may include some foods from the meat & dairy group)

Conclusion: 1. One person from each group will explain how they came up with their group pyramid and how it differs if at all from their personal pyramid.

2. Three or four people could share how the expository pieces affected them and how they think about their food choices. (It may have made no impact)

Taste and money are what has gotten us into this situation today. In order to make more money meat handlers and farmers must produce more of their product. So they each have used artificial ways to produce more. Consumers will not buy them if they do not taste good, so these food providers artificially treat the foods so they look and taste good. Not necessarily are they good for you, now, but they look and taste good.

The following is an article on genetically engineered food. Whether it is good or bad for us is not known. You be the judge. This is a direct quote.

Genetically Engineered Food

(Market News, January 2000, pp. 48,49 -- adapted) Quoted

You are eating genetically engineered food. Is it good for you? Do you have a choice? Genetically engineering is the largest food experiment in the history of the world. We are all the guinea pigs. Sixty to seventy percent of the foods on your grocery shelves contain genetically engineered (GE) components. The FDA estimates that within the next few years 150 new genetically engineered foods will be approved for sale. Genetically engineered foods contain substances that have never been a part of the human food supply. They are not subjected to rigorous pre-market safety testing. And they are not labeled.

Is genetic engineering safe for you and your family? Safe for the environment? Safe for the future of mankind?

No long-term studies have been done. No one can answer these questions.

If you really want to avoid the influence of genetic engineering, buy simple organic foods. If you want to buy processed foods and avoid genetically engineered ingredients, you will have to read product labels. If the label mentions any of the ingredients listed below without explicitly qualifying it as organic, then the product probably contains genetically engineered ingredients.

Primary Suspects: Ingredients and Products to Check

Soybeans: Soy flour, soy oil, lecithin, soy protein isolates, and concentrates. Products that may contain genetically engineered soy derivatives: vitamin E, tofu dogs, cereal, veggie burgers and sausages, tamari, soy sauce, chips, ice cream, frozen yogurt, infant formula, sauces, protein powder, margarine, soy cheeses, crackers, breads, cookies, chocolates, candies, fried foods, shampoo, bubble baths, cosmetics, enriched flours, and pastas.

Corn: Corn flour, cornstarch, corn oil, corn sweeteners, syrups. Products that may contain genetically engineered corn derivatives: vitamin C, tofu dogs, chips, candies, ice cream, infant formula, salad dressing, tomato sauces, breads, cookies, cereals, baking powder, alcohol, vanilla, margarine, soy sauce, tamari, soda, fried foods, powdered sugar, enriched flours, and pastas.

Canola: Oil. Products that may contain genetically engineered canola derivatives: chips, salad dressings, cookies, margarine, soaps, detergents, soy cheeses, and fried foods.

Cotton: Oil, fabric. Products that may contain genetically engineered cotton or its derivatives: clothes, linens, chips, peanut butter, crackers, and cookies.

Potatoes: Right now the only potato that has been genetically engineered is the Burbank Russet, but you still have to look out for potato starch and flour. Products that may contain genetically engineered potatoes or derivatives unspecified processed or restaurant potato products (fries, mashed, baked, mixes, etc.), chips, Passover products, vegetable pies, and soups.

Tomatoes: No plum or roma tomatoes have been genetically engineered. But one cherry tomato has, as have regular tomatoes. Products that may contain genetically engineered tomatoes or derivatives: sauces, purees, pizza, lasagna, and all of those wonderful Italian and Mexican foods.

Dairy Products: Milk, cheese, butter, buttermilk, sourcream, yogurt, and whey.

Animal Products: Because animal feed often contains genetically engineered organisms, all animal products, or by-products may be affected.

Mothers for Natural Law has spent the last three years working with the food industry to find out what the industry knows and feels about genetic engineering. In response to their initial inquiries it was clear that the natural products industry was eager for more information and that the mainstream industry was comfortable with the FDA position on the issue.

One of the biggest challenges natural products manufacturers face is how to keep their products non-GE. To solve this problem, Mothers for Natural Law hired two staff members to search the globe for non-GE ingredients. The database is available for any interested manufacturer.

How Do the Natural Food Companies Rate?

Creating a list of non-GE brands and products for consumers is an on going and labor intensive task. The list below is not complete. It is intended as a starting place for shoppers just learning about GE. If you don't see some of your favorite products on this list, please contact the manufacturers and ask them to call Mothers for Natural Law to be added to this list (515-472-2809). They will check their non-GE status and add them to the list as appropriate.

Here are some specific brands and products that, according to researchers at Mothers for Natural Law, do not contain genetically engineered components.

Dairy Products: Organic Valley Dairy states that all of their products are made with 100% organic ingredients.

Legumes: All Eden legumes

Grains: All Eden grains

Flours: Arrowhead Mills (white rice, kamut), All Eden flours

Nuts and Seeds: almonds, brazils, cashews, hazelnuts, macadamia, peanuts, pecans, pine nuts, pistachios, walnuts, pumpkin seeds, sesame seeds sunflower seeds.

Sweeteners: Eden organic malted grain sweeteners, Kogee Organic Cane Sugar, organic cane sugar, pure USA honey, Sucanat.

Syrups: Eden organic malted grain sweeteners, Spring Tree Pure Maple Syrup

Olive Oils (Extra Virgin): Eden, Spectrum Natural

Other Oils: Eden (Organic Sesame, Toasted Sesame, Hot Pepper Toasted Sesame, and Safflower Oil), Spectrum Natural (Coconut, Safflower, Walnut).

Vinegars: Eden Apple Cider

And many more...

Lesson #3 In Search of Non-Genetically Engineered Foods

Purpose: Students will be more conscious and aware of genetically engineered products in their diet. Only those labeled as not, you could be sure, are not.

Objective: Students will read labels of food items in the house and note (write down) things that are labeled not-genetically engineered.

Students will go to the store and find at least 5 items that say that they are not genetically engineered. They may have to go to a natural foods or health food store like Edge of the Woods in New Haven or Nature's Way in Stratford.

Materials: Notebook, pencils, transportation to a grocery and/or natural food store

Procedure: 1. Ask the students have they ever heard of genetically engineering?

2. Each student is to go to the store or stores and write down the Brand name, item itself, and the name of the store the genetically engineered product was found.

3. Research what genetically engineering is and write the definition.

Conclusion: Was it easy to find non-genetically engineered products? Where were most of them located?

That brings me to the topic of Pesticides. Sure most of the previous paragraphs have encouraged the increased use of fruits and vegetables, but aren't most, if not all, of these affected by some pesticides? I will address the issue through the use of the following summary of an article I read.

In the article, How to Avoid Pesticides by David Schardt, in the Nutrition Action Health Letter, June 1997, we find ourselves in a quandary over the necessity of eating a wide variety of fruits and vegetables and avoiding the affects of the possible residue content on most of them. Buying organic would help, but at this time our choices are few. This is improving.

"But the answer is surprisingly simple: The evidence that fruits and vegetables help protect against heart disease and cancer is far stronger than the evidence that pesticides cause cancer and other health problems."

Pesticides and herbicides have been proven to impair the immune system, affect the nervous system of people of all ages, and be at the root of many cancers. They gain entrance to our bodies, not only through fruits and vegetables, but also through our drinking water as well and fatty meats, fish, and dairy products. It's not as evident in grains, except for rice grown in Southeastern U. S., due to the milling process.

Imported produce tends to have more residue then the local produce, but to be safe, wash all produce thoroughly with clean running water before cooking and eating them. The FDA, the organization responsible for monitoring this, seems to be a little less than adequate in catching the illegal residues due to the lack of funding.

Lesson # 4 Pesticides Analysis

Purpose: The purpose of this lesson is to get the students on the internet and have them analyse and play with the statistics.

Objective: To access the internet and read charts and graphs of pesticides on vegetation To figure out the results of the data given

Materials: Web site- in Google: pesticide data program, notebook, and pencil

www.epa.gov/pesticides/food, see sample data sheet below.

Procedure #1:

1. Have each student or pair of students, depending on how many computers you access to, get to the Google site and find the pesticide data program.
2. As they find different charts, have them record the name of the charts and what they figure out is the results of each.

Conclusions: 1. What did the charts have in common?

2. What were the differences?

3. What did you learn overall from this lesson/activity?

Procedure #2

1. Have the students remain in the pairs and look up the other Website www.epa.gov/pesticides/food and answer the following questions:

How does the government regulate pesticides?
What are the pesticide residue limits on foods/
Why may children be especially sensitive to pesticides/
What does “organically” grown mean?
What are the different types of pesticides on foods?
What health problems do pesticides pose?
What are some healthy, sensible food practices?

Conclusion: 1. What have you learned from the research?

2. Write a summary of your findings.

Free Brochures, Pesticides & Foods: What you and your family need to know, can be ordered by calling 800-490-9198.

The following is taken from an article on cleaning produce to eliminate or reduce its pesticide residue. This is a direct quote.

Coming Clean

(Journal of AOAC International 79: 1447, 1996.) Quoted

Can you do anything to remove pesticide residues on your fruits and vegetables? "You bet," says Herb Schattenberg, an analytic chemist at the Southwest Research Institute, an independent research and development firm in San Antonio, Texas.

Schattenberg and his colleagues tested 17 popular fruits and vegetables for 22 common pesticides both before and after they were cleaned by different methods.

Sixty percent of the samples started out with no detectable pesticide residues. Washing the produce with a mixture of water and mild dish washing detergent (they used Palmolive) and, in some cases, peeling the skins or removing the outer leaves (of lettuce and cabbage), eliminated all residues in another 21 percent of the samples.

Peeling was enough to get rid of all residues in acorn squash, apricots, bananas, carrots, pears, and potatoes. Ditto for shucking corn on the cob.

And even when peeling and washing didn't leave the fruits and vegetables squeaky clean, it lowered the pesticide residues by at least 30 percent. In some cases, it almost eliminated them entirely.

If using mild detergent be sure to rinse the fruits and vegetables thoroughly.

The EWG's complete report, A Shopper's Guide to Pesticides in Produce, is available on the World Wide Web at <http://www.ewg.org>."

Lessons #5 Organic Shopping

Purpose: The purpose of this lesson is to show the students how they could be wise consumers when it comes to avoiding pesticides in the foods they eat.

Objective: Based on the information above about pesticides and other resources, the students will do a week's worth of shopping from the papers choosing the ones with the least potential for pesticide residues and/or the ones they could most effectively remove the residue danger.

The students will explain how they will rid the food they chose of the residue.

The students will chose wisely to get the most for their set amount of money.

Materials: Circulars from the various food stores, notebook, pencils, dish detergent, fresh fruit or fresh vegetables, two (2) large bowl, water (distilled), hot plate, paper plates (for each students), margarine, play money (\$25.00), more TBA

Procedure: 1. The students will gather circulars from various food stores in the areas where they live. (Stop &

Shop. Shoprite, Walbaums, Kmart, Shaw's,

2. They will work in groups of three or four and develop a shopping list from the circulars for a week's worth of food. Breakfast, Lunch, and Supper should be on their minds as they make their choices. Also the fact that they have only \$25.00 to spend.

3. Then an explanation should be written in their notebook for each choice.

4. An explanation and demonstration will be given of how they will clean a fruit or vegetable using the ones provided by the teacher and some students.

Conclusion: 1. Do you have control over how many pesticide residues enter in your body?

2. How did this lesson help you recognize that fact?

3. Do you feel this was necessary information?

Water: It is necessary or optional? And how much?

Let's not forget our Internal Shower. Nearly 70% of our planet is water. 65-75% of the human body is composed of water and 85% of the brain is water. Do we not realize how essential this beverage is? It is in every cell and tissue of the body, is the foundation of blood, and is vital to almost every biological process including circulation, absorption, excretion, and digestion. For our organs to function properly, we must supply the body with water daily. Some doctors have mistakenly advised their clients to drink "plenty of fluids" instead of "plenty of water." Most of them don't know the difference themselves so many people fill up on soft drinks, coffee, alcoholic beverages which actually make you even more thirsty.

But now, more than ever, we must pay close attention to the water we drink. Many diseases and parasites have been spread through the water. The best way to get the best water is to get a distiller. They are quite affordable at this time. Either you pay now or you might end up paying in the long run, through impoverished health. There is another type of water preparation to be considered, reverse osmosis. Its affect on the water is just as good as the distiller. Dasani bottled water is prepared by reverse osmosis and Aquafina bottled is prepared by a distiller. Two quarts of water a day (8 cups) minimum would be enough to make a marked difference in your body functioning in just two weeks. All the proper proportions of foods would do you no good if your system didn't get its daily internal shower, Water! But be careful to wait at least 1 ½ - 2 hours after a meal before drinking, as the liquid would interfere with the digestion process by diluting the digestive juices. Try it. Enjoy it!

Conclusion

The standard USDA Food Pyramid, regardless of which culture it represents, falls way short of the mark for obtaining top quality health. It contains too much grains and meat and not enough fruits and vegetables. Remember the ox and the elephant? If scientists and doctors can use rats to test for cures for the diseased human body (RATS), why not learn from the healthy ox and the elephant?

For Optimum Health consider trying the 80% (group 1) and 20% (group 2) method described in this unit. Let the lessons from the Modern Machine and the Lessons from Nature help you to make this momentous step. Give it one (1) month to a year. I assure you, you will feel the positive difference. And maybe, just maybe some of those health problems your families suffer from, because they have always eaten the same things, the same way, from generation to generation can begin to reverse or go away.

Culminating Activity

Fruit Pizza (For a Healthy Snack or Meal)

Materials:

Fruits (washed, peeled, and cut), Honey Crunch Wheat Germ, Large Oatmeal Cookies, Malt-Sweetened Carob Chips, Non-Dairy Whipped Topping (a lot), Paper plates, plastic knives and forks.

As a culminating activity you will have the students/parents purchase fruit, organic and not, many different varieties. If they can't find many organic fruits, have them buy fresh fruits and wash them really well then, peel them before they bring them to class. You, the teacher, will make a large oatmeal cookie, for each student. Have four parents buy non-dairy whipped topping, a lot of it and some Honey Crunch Wheat Germ. All the fruit should be cut into nice neat pieces. Monitor the cutting closely. No real sharp knives.

Have the students place their cookies on their plate and spread the non-dairy whipped topping over the top leaving about 1 inch from the edges clean. Then they can add what- ever fruits they like, on top of the whipped topping. Have them arrange it in a symmetrical design (an optional Math moment). Top the whole arrangement with sprinkles of Wheat Germ and Carob Chips sweetened with malt sugar. Happy Eating.

Encourage the students to try this at home with their family members and friends.

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