

# Pure Facts

Newsletter of the Feingold® Associations of the United States



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## Editorial

### Who's Minding the Store?

Most people find it hard to believe that the federal government would allow the use of food additives believed to cause learning and behavioral problems in children. But critics charge Uncle Sam has chosen the fox to guard the chicken coop.

Attorneys general in eight states are investigating advertising claims on the part of major food manufacturers. If the health claims made for their products are found to be false, companies such as Nabisco, Campbell Soup, Louis Rich and Sara Lee could face stiff fines. (In 1987 the Reagan administration overturned the longstanding policy of preventing food companies from making health claims for their products.)

*While the states were preparing to assume a greater regulatory role, what appears to be an unrelated event was taking place in Washington, D.C.*

The pharmaceutical company, Mylar Laboratories, hired private detectives to investigate employees of the Food and Drug Administration's (FDA) Generic Drug Division. The detectives were able to collect evidence that at least three FDA scientists accepted bribes from drug manufacturers.

Stung by criticism, the agency then took a closer look at this industry. FDA inspectors — who generally inspect drug plants, but do not examine the drugs themselves — then found additional fraud. At least two manufacturers of generic drugs substituted brand name products for testing. Several companies now face criminal charges.

Manufacturers of brand name drugs have not escaped charges of fraudulent practice. FDA inspectors have found violations in at least five plants.



*Both of these developments — the increased activism on the part of the states and the drug scandals — point to the woes of an agency designed to protect the public welfare. What went wrong?*

Prior to the election of 1980, presidential nominee Ronald Reagan promised to "get the government off the back of industry". The Public Citizen Health Research Group reports that "By June 1982, Vice-President Bush was able to give a progress report that the Reagan administration was delivering what they had promised in a speech he gave to the drug industry in Washington, D.C. Bush said that "I think we've started to see this philosophical shift, the end, or the beginning of the end, of this adversarial relationship. Government shouldn't be an adversary. It ought to be a partner.'"

This issue contains an article on food dyes from *The Monitor*, the newspaper of the American Psychological Association. You may wish to pass it along to an interested friend or professional.

At about this time a new policy was announced by Richard Schweiker, who was then Secretary of FDA's parent agency, the department of Health & Human Services (HHS). Schweiker took back the authority to regulate foods, drugs and cosmetics, which had long been the responsibility of FDA.

Then, in 1984 the FDA expanded its "honor system", which relied on the manufacturers of generic drugs to provide data of their own products' effectiveness.

Curiously, this friendly climate didn't achieve what the drug industry had anticipated: a speedier approval of new products. By 1985 *Business Week* magazine reported "The problems are largely industry's own fault — the result of increased reliance on political end runs. Because of this, decisions once made on scientific grounds are now made by political appointees at HHS and the Office of Management and Budget, and industry leaders are finding that political decisions can be slower than scientific ones."

1985 was also the year New York congressman Ted Weiss held hearings on the government's failure to ban six cancer-causing dyes. By that time, the unprecedented changes created by the administration were taking their toll. Morale at FDA had reached such a low point the agency lost more than 900 career employees. They were "departing in droves", according to *Business Week*.

*Continued on page 6*

The Feingold® Associations of the United States, Inc., founded in 1976, are non-profit volunteer organizations whose purposes are to support their members in the implementation of the Feingold Program and to generate public awareness of the potential role of foods and synthetic additives in behavior, learning and health problems. The program is based on a diet eliminating synthetic colors, synthetic flavors, and the preservatives BHA, BHT, and TBHQ.

## Twenty-three Years of Hyperactivity

Most of my life has been spent fighting. I fought on the playground, on the school bus, and when I got home from school I fought with my mother every day about homework.

I was on Ritalin for awhile, but my parents didn't like what it did to me so we tried the Feingold diet. It worked fabulously — until I was old enough to get to the stores on my own and cheat. From then on I was not on a diet or medication. Life was hard for me, and for everyone around me.

The principal of my elementary school told me I was dumb, and predicted I would never make it through high school, let alone college.

Special tutors were always there; I even received academic tutoring at camp. But no matter how hard I tried or how long I studied, the grade was always a "C".

When my mother learned my school was required by law to provide LD help, she petitioned the school, the school board, and the state government until a LD specialist was hired. Within a year the specialist was there full time and had a full compliment of students.

Some valuable programs enabled me to overcome my learning problems. The first was Landmark, a summer camp in Massachusetts, which consisted of classes in the morning and sailing in the afternoons. Landmark was terrific; for the first time I fit in with the other kids. The high level of activity kept my behavior in check, and the support helped me develop a pattern of study. I learned how to ask questions when I didn't understand something. In one summer, the program improved my grades in both math and English.

High school was still a struggle, but I continued to receive extra help, and by senior year, things had improved and my grades were C's and B's.

After high school I participated in a three week summer program for students who will be attending Curry College in Milton, Massachusetts. The course is designed to help students get ready for college work, and it really turned my life around. I began to gain a real interest in my classes. Writing research papers no longer intimidated me. In fact, I now find them easy.

Graduating from college was rewarding, and so was my acceptance into law school, but I was far from happy.

I no longer fought on the school bus or playground, but I was very uptight and would lash out at others. I couldn't read a book for more than five minutes, never sat still, would wake up and hit the floor running, and not slow down all day. My mind raced, and it didn't take much to frustrate me. Every activity was done with great intensity: walking heavily, slamming doors, listening to loud music and driving over 80 miles an hour.

I hadn't forgotten that the Feingold diet made a difference, and a look at the symptoms of hyperactivity indicated that at age 23 I had nearly every one of them. I decided it was time to put myself on the diet.



David Blumberg

It's only been a few weeks, and I'm a very different person. I'm happier, much more cheerful, sleep well, relax, and enjoy being alone some of the time. Now I can read for an hour, hold a lengthy conversation, or watch TV. Even my taste in music has changed; I like a slower beat. Friends call me "unbelievably patient" as I don't get upset as easily; they were astonished when I let my brother borrow my brand new car.

I recently went back to my elementary school and confronted the principal who had once called me "dumb", but it didn't bring me any satisfaction. I can bring satisfaction into my own life now.

## Frustration

Frustrated — being thwarted; being prevented from attaining a purpose; from frustra, meaning "in vain".

That's what I feel when I observe my young adult son's tic or repetitive throat-clearing

...when I see the soda cans in the trash and the six-pack in his refrigerator

...when he talks compulsively of buying a house although he and his wife still owe money on two vehicles and are expecting a baby

...when he sweetly, but impulsively buys me a pair of pierced-ear earrings without stopping to think that my ears aren't pierced

...when he gets a worrisome idea lodged in his mind that he can't resolve, but rides it like a merry-go-round and verbally perseverates like a broken record

...when he's "high" on additives, and relies on alcohol to bring him down

...when he won't ask his wife to cook additive-free for him.

Eight years ago he realized that food additives affected him adversely. He ate "clean" at home, but even then, often cheated at school or friends' homes.

In those early years, when cheating was obvious (and frustrating) I wondered, "Why bother? Should I just give up and go back to pre-Feingold ways?" After some indecision I concluded I would continue to "cook Feingold". It's more nutritious, more healthful; no one needs those artificial additives. Also, once I became a believer, I couldn't switch back. I hoped, too, that my faithfulness to it would eventually convince him.

Will my son ever return to additive-free eating? I don't know. Maybe his child will need the program; that can be a strong incentive. Maybe he'll decide he wants to feel and function better; he knows the answer, at least.

What balances my frustration? The knowledge that he is a sweet, compassionate, sensitive young man; a conscientious, industrious worker. He has many lovable qualities, along with those that drive me up the wall.

So life continues...I worry...and pray...and keep a Feingold Association membership blank handy just in case.



## Dill Dip

3 oz. cream cheese, softened  
1/4 C. mayonaise or salad dressing  
2 green onions & tops, minced  
1 tsp. dill weed (dried)  
1 tsp. parsley (chopped or dried)

Cream all the above together and refrigerate until ready to serve. Serve with celery, raw cauliflower, raw carrots. (May be doubled and use 8 oz. cream cheese.)

## Teriyaki Meatballs

Form 3 lbs. of hamburger into tiny balls no more than one inch across. (makes about 100.) Place in large flat roasting pan. Mix the following and pour over meatballs.

1 C. soy sauce  
1/2 C. water  
2 tsp. powdered ginger  
2 cloves chopped garlic

Cook uncovered for one hour at 275 degrees. Serve warm.

## Caramel Dip

8 oz. cream cheese  
3/4 C. brown sugar  
1/4 C. white sugar  
1 tsp. vanilla

Soften cream cheese. Mix all ingredients together with mixer or blender until smooth. Serve at room temperature with fruit for dipping. Bananas, fresh pears and fresh pineapple are good on Stage I, apples for Stage II.

## Easy Dip

Low-fat yogurt  
Marie's Ranch Dressing

Combine in equal parts. Use for dip for chips and vegetables, topping for baked potatoes, or use on cold pasta salad.

## Little Link Oriental Sauce

1 C. packed brown sugar  
3 T. flour  
2 tsp. dry mustard  
1 C. pineapple juice  
1/2 C. Heinz white vinegar  
1 1/2 tsp. soy sauce  
little weiners and/or little smokies, or cut weiners bite-size

Combine sugar, flour and dry mustard in saucepan. Add pineapple juice, vinegar and soy sauce. Heat to boiling, stirring constantly. Boil 1 minute. Stir in little weiners & smokies. Cook slowly 5 minutes or until heated through. Keep warm to serve.

## Stuffed Mushrooms

1 lb. fresh mushrooms, cleaned & stemmed  
1/2 C. butter or margarine  
2/3 C. shredded mozzarella cheese  
2 Tbs. bread crumbs  
1 tsp. Italian dressing (see foodlist)  
1/2 tsp. oregano

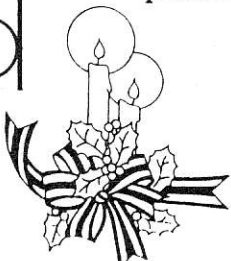
Preheat broiler, toss mushrooms in melted butter. Place hole up on cookie sheet and broil for 1-2 minutes, or microwave on high for one minute. Combine remaining butter with other ingredients in small bowl--fill mushrooms. Broil 3-5 minutes.

## Pineapple Banana Slush

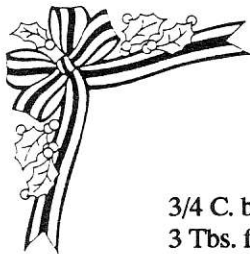
1 1/2 Cups unsweetened pineapple juice  
1-6 oz. can lemonade concentrate  
1 ripe banana, cut up  
2 Tbs. sugar  
7 Up

In blender combine pineapple juice, lemonade concentrate, banana and sugar. Cover & blend until smooth. Freeze in plastic containers. To serve: thaw 1 1/2 to 2 hours. Spoon 3-4 Tbs. into each of four glasses. Pour 1/4 can of 7 Up over slush in each glass.

by Barbara Keele







### Shrimp

3/4 C. butter  
3 Tbs. finely chopped green onion  
1 tsp. finely chopped garlic  
2 Tbs. lemon juice  
1 C. parmesan cheese  
36 large fresh shrimp (16-20 count)

Peel, devein and rinse shrimp. Melt butter and stir in onion and garlic. Save out 2/3 cup of this mixture. Pour remaining butter mixture in 12 x 8 x 2 baking dish. Spread shrimp in dish, then cover with cheese. Pour the reserved 2/3 cup butter over the cheese. Bake at 350 degrees until shrimp become pink. Stick each shrimp with a toothpick to serve.

### Holiday Olive Spread

(uses food processor)  
(Stage I & II)

1/4 C. walnuts or pecans  
1/2 C. green pimiento\* stuffed olives, drained  
1- 8 oz. soft Philadelphia cream cheese

Place nuts in food processor bowl. Cover and pulse until finely chopped. Add olives to bowl with nuts, cover and pulse until finely chopped. Add cream cheese in 4 spoonfuls to bowl, cover and pulse until ingredients are mixed. Serve with crackers.

\* For Stage I, remove pimientoes from olives.



### Refried Bean Dip (Microwave or Crockpot) (Stage II)

1 can refried beans  
1 C. shredded cheddar cheese  
1/2 C. chopped green onions  
1/4 tsp. salt  
2 T. bottled taco sauce

Microwave: In a 1-quart serving dish, mix all ingredients. Cook, covered on HIGH for 4 to 5 minutes, stirring several times, until mixture is hot and bubbly and cheese is melted.

Crockpot: In slow cooking pot, combine all ingredients. Cover and cook on low for 2 to 1 1/2 hours.

Serve with tortilla chips.

### Cranberry Tea (Stage II)

2 orange-spice tea bags  
1 qt. boiling water  
2 C. hot cranberry juice  
1/3 C. sugar  
1/4 C. orange juice

Steep tea bags in boiling water for 5 minutes. Remove tea bags. Add remaining ingredients to tea.

### Holiday Cheese Ball (Stage II)

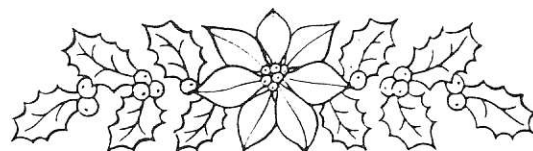
2- 8 oz. pkg. cream cheese  
1- 17 oz. can drained crushed pineapple  
2 C. chopped walnuts  
6 oz. dark sweet cherries, chopped

Combine cream cheese, pineapple and 1 C. of the nuts. Gently fold in cherries. Shape into a ball and roll in the remaining nuts. Cover in plastic wrap and chill overnight.

### Salmon Ball (Conditional)

1 lb. can of salmon, drained and boned  
8 oz. cream cheese, softened  
1 Tbs. lemon juice  
a couple drops of Wright's liquid smoke

Mix all ingredients together & chill. Form in ball & roll in chopped pecans & parsley. Serve with crackers. (Note: Reactions have been reported to liquid smoke by some sensitive members.)



## A Good Night's Sleep

A Feingold adult relates a connection between additives, salicylates and sleep disturbances.

Denise Flem wrote of her response to the Feingold Program in a recent issue of the PATH of New Jersey newsletter.

She began the diet way back in 1972, a year before Dr. Feingold first introduced his program to the American Medical Association. Her aunt had learned of Feingold's work and had successfully used the diet with her son. Denise's mother hoped it would help her daughter to sleep normally.

She was an impulsive child, and often seemed to be lost in her thoughts, but for Denise the most troublesome thing was being unable to fall asleep at night. "I remember being in bed for hours, and would ask 'Mom, how do you go to sleep?'" she recalls.

Seventeen years later, Denise still sees the difference foods and salicylates make — both in her sleep and in her 3 year old daughter's behavior.

## Australian Study of Feingold Families

*A survey of 170 families using the Feingold Diet has recently been completed by the psychology department of the University of Queensland, in cooperation with the Queensland Hyperactivity Association.*

One of the interesting results was the number of behaviors, not necessarily connected with hyperactivity, which improved; in addition there were many health benefits noted by the families. The report, published by the association, notes "In view of the common impression that hyperactivity should be diagnosed before the Feingold diet is recommended, it was interesting to see that the items showing greatest change were (in order): effectiveness of punishment, truancy, throws self around, unhappiness, nightmares, inability to fall asleep, gets stiff and rigid, twitches, sets fires."

The most dramatic change in schoolwork was the decline in reversing letters. Other improvements were seen in reading ability, spelling, math, and — for some children — a reduction in the fear of school.

Health improvements were noted in these areas: sore throat, tonsillitis, bronchitis, colds, bed wetting, urinary tract infection, diarrhea, constipation, stomach pain, leg pain, joint pain, headache, ear infection, twitching, eczema, and rashes.

## Caffeine - More than just "coffee nerves"

New information on this familiar substance is pointing to its potential to cause severe behavioral reactions in susceptible individuals.

The Food and Drug Administration identifies caffeine as "a drug that stimulates the central nervous system. It can cause nervousness, irritability, anxiety, insomnia, and disturbances in heart rate and rhythm. It also seems to influence blood pressure, coronary circulation, and the secretion of gastric acids." (*FDA Consumer*, 1/88)

Andrew H. Mebane, M.D., a New Orleans psychiatrist, investigated the connection between caffeine and psychiatric disorders. One patient was a truck driver who was diagnosed as schizophrenic after doubling his intake of Coke to 20 cans a day.

Another psychiatrist, Michael Breslow, M.D. at the University of Arizona, suggests that caffeine can play a part in panic attacks. He notes that a single can of cola can cause a sensitive individual to experience shortness of breath, pounding heart and sweating.

Some of the effects attributed to caffeine include the ability to: reduce the body's anxiety-relieving systems, block the actions of adenosine (a chemical that checks the nerve cells involved in anxiety reactions), block opiate recep-

tors that manage pain, as well as to neutralize medicines such as depressants and tranquilizers.

Caffeine occurs naturally in coffee, tea, and chocolate. While it is found in the kola nut, only about 10 percent of the caffeine in cola drinks is derived in this way. Ninety percent of the caffeine in cola drinks is deliberately added. (Some other soft drinks also contain added caffeine.)

Several million pounds of caffeine are used in foods and medicines in the United States each year; it is obtained from coffee beans, treated for use in decaffeinated coffee.

Caffeine is not eliminated on the Feingold Program, and moderate amounts seem to be tolerated by most people, but very sensitive members should be aware of potential adverse effects.

### Amount of Caffeine in Foods:

Item	mg. of caffeine
Coffee (5 oz cup)	
Brewed, drip method	115
Brewed, percolator	80
Instant	65

### Tea (5 oz cup)

Brewed, major US brands	40
Brewed, imported brands	60
Instant	30
Iced (12 oz glass)	70
Cocoa beverage (5 oz cup)	4
Chocolate milk (8 oz)	5
Milk chocolate (1 oz)	6
Dark chocolate (1 oz)	20
Baker's chocolate (1 oz)	26
Cola, some soft drinks (6 oz)	15-23

### What do we drink?

Last year Americans drank what averaged out to nearly 46 gallons of soda pop per person. Coffee, once the number one drink, was consumed at an average of 25 gallons. Beer was third at 23.6 gallons per person, and milk was fourth at 21 gallons.

### Caffeine for Hyperactivity?

Coffee has long been known to have a sedative effect on some hyperactive children, and was often used before Ritalin captured the market.

Asked about the advisability of giving coffee to hyperactive children, Dr. Feingold responded: "It's just another drug."

The Feingold® Associations do not endorse, approve or assume responsibility for any product, brand, method or treatment. The presence (or absence) of a product on a Feingold foodlist, or the discussion of a method or treatment does not constitute approval (or disapproval). The foodlists are based primarily upon information supplied by manufacturers, and are not based upon independent testing.

FDA, from page 1

FDA isn't the only agency whose job is being assumed by others. More than 1,000 food markets in this country have joined industry, environmental and consumer leaders in plans to phase out the purchase of produce which has been treated with harmful pesticides. While the Environmental Protection Agency continues to allow the use of these chemicals, shoppers are beginning to find organic fruits and vegetables showing up in their supermarkets.

So who's minding the store? Some state officials, some consumer advocacy groups, and some industry representatives are picking up the slack, but for the most part, you and I are. When the founding fathers established a "government by the people" more than 200 years ago, I don't think this is what they had in mind.

*Pure Facts* is published ten times a year and is a portion of the materials provided to members of the Feingold Association of the United States. For more information, contact FAUS, P.O. Box 6550, Alexandria, VA 22306. (703) 768-FAUS.



## Pollution Inside Your House

**I**ndoor pollution is a greater concern during cold winter months when windows and doors are kept closed. These chemicals are harmful for everyone, but are likely to be a particular problem for the chemically sensitive person.

Among the worst offenders are: gas appliances, including gas and oil furnaces which may leak fumes; kerosene heaters; fires in fireplaces or woodstoves; filters on heating systems and humidifiers (they can collect dust, bacteria, mold); formaldehyde, which can be found in pressed wood furniture and paneling, carpeting, upholstery fabrics, insulation in walls and around pipes, particularly in mobile homes; cleaning products, especially those using chlorine bleach.

Some of these problems can be diminished by venting fumes to the outdoors, and others by airing the house out occasionally; whenever possible, use electricity in place of gas, kerosene, or burning wood; keep filters cleaned; choose hardwood furniture and paneling over particleboard; when carpeting needs to be replaced, consider hardwood or tile floors and area rugs.

One more caution, avoid running the engine of your car in an attached garage, particularly if there are rooms above the garage. If you need to warm up the car, back it out of the garage a little way so the exhaust fumes don't seep into the house.

**W**inter is not the best time to paint inside your home. Unless you live in a moderate climate, this task should wait until the weather is nice enough to have the windows open.

Fumes from paint (especially oil-based paints) can be very irritating for the chemically-sensitive person. Similar problems can result from overexposure to various solvents, paint thinner, glues and even nail polish and nail polish remover.

For some individuals, these chemicals appear to be capable of causing violent behavior. Researchers at the Karolinska Institute in Sweden found a much higher incidence of violent crimes among prisoners who had earned their living working as house painters, car spray painters, and who were exposed to glues used in installing vinyl floors.

A Nashua, New Hampshire firm has found a way to combine the advantages of oil-based paint with those of latex. Researchers at Micro Vesicular Systems, Inc. have developed a technique for encapsulating microscopic droplets of oil paint inside tiny sacs, suspended in water. When the water evaporates, the sacs break, leaving a smooth coat of pigment. Unlike traditional oil paint, this does not produce volatile fumes. Commercial development of the paint is proceeding.

Members interested in locating non-toxic paints, thinners, varnishes, shellac, adhesives, waxes, etc. can request a catalog from Livos Plant Chemistry, 2641 Cerrillos Road, Santa Fe, NM 87501 (505) 988-9111.

## Past Issues of Pure Facts are Available

During the past year, major articles which have appeared in *Pure Facts* include:

### Dec 1988/Jan 1989

Special issue on Food Allergy  
Ritalin increase noted in JAMA  
Crib death/sleep apnea

### Feb 1989

Newest study supports Feingold's work  
Pesticides, Organic agriculture  
New additives, Sulfites  
Headaches

### Mar 1989

Religion and the Feingold Program  
"Sick building syndrome"  
Feingold diet goes Hollywood  
"Good nutrition"/consumers rights

### Apr 1989

Finding camps for Feingold kids  
Pesticides & natural alternatives  
Policy statement on Ritalin

### May 1989

Anniversary issue: "Feingold kids" on the diet 10 years or more  
New synthetic sweeteners

### June 1989

Summer travel  
Response to *Woman's World* article  
Product alerts!

### July/Aug 1989

Fast Food booklet  
The lonely parent  
Reactions to fragrances  
Chemicals in coffee

### Sept 1989

Special issue on learning disabilities  
FAUS Videotape available  
Conference report  
Chemicals in the school

### Oct 1989

Special issue on mental & emotional disorders, including resources for families  
Cutting back on cholesterol

### Nov 1989

Special issue on Teens  
Dealing with the relatives  
Chemical consciousness quiz  
Mysterious "1% success rate"

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## Public lectures

# Food coloring may alter kids' behavior

By Susan Moses  
Monitor staff

### NEW ORLEANS

**T**he current system of testing chemicals for safe exposure levels, with its strong focus on detecting carcinogens, can fail to uncover the psychological and behavioral consequences of exposure, according to Bernard Weiss, deputy director of the University of Rochester's Environmental Health Sciences Center.

In a public lecture titled "Environmental pollution and behavior disorders" at the American Psychological Association convention here in August, Weiss explained that behavioral and psychological effects often occur at exposure levels far lower than those that induce cancer or other physical effects.

Young children, and especially infants and fetuses are more sensitive to environmental contaminants and food additives than adults are, because their metabolic processes are less mature and efficient, Weiss maintained.

He cited a study by David Bellinger and Herbert Neeleman in the early 1980s that measured intelligence test scores of 249 children, all from upper-middle class homes in the Boston area, who had been exposed to

different levels of lead before birth.

The entire exposure range was well within the safety limit set by the federal Centers for Disease Control. But the children at the high end of the scale scored 8 percent lower on the Bayley Mental Development Index than did children with lower levels of prenatal exposure. The phenomenon held true even though mean levels of exposure after birth were the same for both high and low prenatal exposure groups.

An 8 percent difference in performance may not seem dramatic, but when that figure is extrapolated to the general population, Weiss said, "I consider it a societal disaster." If the general population were to score only 5 percent lower on the Stanford-Binet IQ test, then only 990,000 people out of 100 million would score above 130, instead of the current estimate of 2.3 million, he said.

"The effects of lead are more firmly recognized in the pediatric community than among psychologists," he said in an interview after the lecture. "I don't think psychologists tend to be as aware of environmental chemicals."

Weiss also described research he and his colleagues conducted on the effects of FDA-certified food colorings on children's

behavior.

Twenty-two children, ages 2 to 7, were recruited from a group of children who had been placed on the "Feingold diet," developed by pediatric allergist Ben Feingold. The diet excludes synthetic colors and flavors, various other additives and foods suspected of causing hyperactivity. Although none of the children was clinically hyperactive, their parents had found that the diet helped control other minor behavior problems. The children were maintained on the diet during the 11-week study.

The researchers concocted two soft drinks: a placebo with cranberry and caramel coloring, which were not on Feingold's prohibited list, and a drink with a mix of seven colors, each of which was approved by the Food and Drug Administration, but was excluded from the Feingold diet. The total amount of coloring in the trial soda matched the average daily intake of those colors by children on a normal diet, and was 50 to 60 times less than the FDA-approved allowable daily intake, Weiss said. The children drank the trial soda on eight of the 77 days of the study. The colors they selected are found in a variety of foods. A Drug and Cosmetic Yellow No. 5,

for example, one of the prominent colors in their mix, is added to a number of children's cereals, including Cheerios, Trix, Froot Loops and Lucky Charms. It is also found in some pastries, brownie and cake mixes, and candies, usually in a blend with other colors.

Two children were affected by the drink mix, one dramatically. She was 34 months old—the youngest child in the study. On days when she drank the trial soda, her mother noted that she whined, threw things, ran away, acted "as if driven by a motor," and had a short attention span far more often than on other days. Her age and "biological variability" probably made her more sensitive to the coloring than other children, Weiss said after the lecture.

Two responders out of 22 subjects is not a large percentage, Weiss admitted. But he asked, "if bilious green had been developed as a food color, and its manufacturer had sought approval with a claim that only 5 percent of the children consuming it got cancer, what would have been the response in Congress even had the FDA granted the request?"

When James Swanson and Marcel Kinsbourne (1980) tested the effects of larger doses of food colorings on clinically hyperac-

tive children, 17 of their 20 subjects had impaired performance on a paired-associates learning task following exposure to the color blend.

Despite the potential effect food coloring has on behavior, Weiss said, "colors are not tested for behavioral toxicity. They're tested for cancer, or other [physiological] effects."

Jean Taylor, a team leader at the FDA's division of toxicological review and evaluation, disagreed. She maintained in a telephone interview that researchers "look for both" behavioral and physiological effects when they test the safety of food additives. Behavioral abnormalities, such as unusual reactions of mice and rats to being handled by researchers, would be noted through the course of the study, she said, and would be thoroughly investigated.

She added, however, that specific neurobehavioral tests are not usually done for food additives, because "you're working with substances that are generally safe." She also said that "cancer is a major endpoint" in research, because if an additive is found to cause cancer at any dose level, it cannot be approved by the FDA, even for use in much lower levels. ■