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Putting medical and nutrition news into historical, scientific and just plain practical context. You are free to copy, send or print any of the articles. Just have the courtesy to leave my name and sponsorship on each page.

Written and published by Ann Gerhardt, MD Approximately 6 issues per year. Request a free email subscription or information about sponsorship at: algerhardt@sbcglobal.net. Or send \$18 for a year's hard-copy subscription to be mailed to you to: P.O.Box 19938, Sacramento, CA 95819. Read past articles at www.drgsmedisense.com.

Since DrG'sMediSense is merging with We Insist on Natural Shapes (WINS), you may support the work of both by making a tax-deductible contribution to WINS! Please send it to WINS, P.O.Box 19938, Sacramento, CA 95819.

ATTENTION ALL WORD WIZARDS!

We need help creating a slogan. The Sacramento Sierra Valley Medical Society Alliance awarded We Insist on Natural Shapes a grant to help prevent both obesity and eating disorders. The money is to be used to print posters for classrooms. The grant did not include enough to hire marketing and graphic design firms to create the content. That's OK, since utilizing students and people like you for ideas makes them/you think about the concept and that contributes to learning.

WINS has traditionally directed its efforts to preventing the wasting-type of eating disorders. Now we are trying to incorporate into one message two concepts: DO eat to maintain health and treat the body well and ONLY eat in response to physiologic needs rather than overdoing it (which is also maintaining health and treating the body well).

We will be conducting a student poster contest in the fall to take advantage of creative young minds for the artwork, but we need a slogan. If any of you have brilliant or not-sobrilliant ideas about a succinct catchy slogan that gets the dual message across, we would love to see it.

We'll let students pick the one with the most impact in focus groups (which again will contribute to learning). Please send your ideas to Dr G at algerhardt@sbcglobal.net or P.O.Box 19938, Sacramento, CA. THANK YOU!



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And those whose business cards are included in this issue.



CHEAP CALORIES by Ann Gerhardt

Subscribe at www.drgsmedisense.com 5/24/07

Bottom line at the top: Cheap sugar from corn and oil from soybeans has reduced the cost of high calorie food and made junk food possible. People now complain that healthy food costs more than does junk food, and use that as an excuse to eat a diet that raises blood pressure, cholesterol and weight. It's a bunch of self-deluding bunk ... See below for proof that a healthy, inexpensive diet is possible.

Calorie for calorie, junk food is cheaper than fruits and vegetables. But who proclaimed that he who eats the most calories for the least money wins???

A dollar buys five times as many calories from chips than from carrots. Does that mean we eat 1200 calories of chips because they only cost a dollar? Just because it represents a 'bargain' in money, need we bargain away our waist line and health?

Since high-fructose corn syrup entered the market and corn and soybean agriculture have been subsidized by the U.S. government, vast quantities of sugar and oil have made cheap junk food possible. The food industry has created foods and beverages in which cheap sugar and fat form the bulk of the product. Any whole food contained in the product merely adds an identity (as in *potato* chip or *corn* chip) and purely incidental nutritional value.

The steep rise in corn sweetener consumption is largely due to high-fructose corn syrup, a low-cost substitute for sugar in beverages and manufactured foods. High-fructose corn syrup (HFCS) didn't exist prior to the 1960's, when food chemists figured out how to enzymatically convert glucose to the sweeter fructose. Corn is cheap and grown in mega-amounts, and in the 1970's corn processors developed HFCS mass-production methods. HFCS thus enables the food industry to make very sweet products at a fraction of the cost of naturally sweetened foods.

Junk foods, sweetened with high fructose corn syrup and made to taste rich with cheap soybean oil, are more "energy dense" than fresh foods. They contain less water and fiber but more calories than unprocessed vegetables, beans, grains and fruits. Though one might think that eating heavier food would fill you up quicker, the opposite is true. Studies of satiety have proved that eating foods high in water and fiber (vegetables, beans) create a feeling of fullness sooner, so you eat less. Eating calorie-dense foods packs on the pounds more easily because the foods have more calories, but are slow to turn off the urge to eat.

Instead of allowing cheaper food to reduce our food budget, however, Americans eat more food every year.

The total amount of food entering the market each year increased 16 percent, from 1,675 pounds in 1970 to 1,950 pounds in 2003 per U.S. resident.

The increase in food available for consumption resulted in a corresponding jump in daily calories, from 2,234 calories per person in 1970 to 2,757 calories in 2003 (after adjusting for plate waste, spoilage, and other food losses). This increase was not isolated to a few food groups. Fats and oils, grains, vegetables, and sugars/sweeteners led the way.

According to the Corn Refiner's Association, annual per capita HFCS consumption increased from 45 to 66 pounds per year between 1985 and 2005. Even with the mid-1990s push to cut dietary fat, added fats and oils accounted for an extra 216 calories per person per day.

So high calorie manufactured food is cheap. Is that why people spend their 75ϕ on 250 calories of Snickers bar instead of 18 calories of spinach? Even though 18 calories of spinach will last for $2\frac{1}{2}$ salads and a Snickers is gone in a few minutes, more people buy the candy, probably because of taste. And that's probably why people use the "expensive" excuse for not buying healthy food.

In fact, healthy food need not cost any more than junk food. Buying 'fast' food at the deli section of the supermarket, depending on your choice, may be no more expensive than the Carl's Jr or Burger King. Just make it healthy by purchasing nothing with mayo. In the market, what counts is how you shop. Berries, scallops and artichokes are expensive, but the profusion of pre-prepared junk freezer foods are also. At the end of this article is a list of healthy foods and their cost per serving.

I compared two hypothetical day's worth of meals, each providing 75 grams of protein.

One contains foods that provide a near perfect balance of all the food groups and essential micronutrients, and the other is full of high calorie, but standard American fare.

The "healthy day" consists of: 1 c. oatmeal with 2% milk, 1 tsp brown sugar and 1 Tbsp raisins, 1 egg, 1 slice lean turkey bacon and coffee for continued on page 3

Calorie inflation continued from page 2

breakfast; a peanut butter and jelly sandwich (2 Tbsp PB), 2% milk and a 2 cup spinach salad with sliced onion, radish and tomato and an oil and vinegar dressing for lunch; an apple, 1 oz. peanuts and a cup of tea for a snack; and 3.5 oz salmon, a baked potato with plain yogurt, a small cup of homemade bean soup, 1 cup of cooked greens with onions and mushrooms and a cup of milk for dinner.

The junk food day consists of: 1 c. Fruit Loops with whole milk, 1 egg, regular bacon and coffee for breakfast; a ham and cheese sandwich, 12 oz soda and 2 oz Dorritos for lunch; a candy bar for snack; and 2 cups spaghetti with sauce, 5 oz meatballs and 12 oz soda for dinner.

I analyzed each day using standard portions (according to package labels and dietitian standards), recognizing that few people actually eat standard portions, but I wanted to compare the two diets on a level playing field. I used prices from my neighborhood Safeway market and the Food Coop, assuming the purchase of bulk foods or the largest package available.

The 'healthy' day weighs in at 1860 calories and costs \$5.07, which is 0.27 cents per calorie. The junk food day packs on 2440 calories and costs \$4.90, which is 0.2 cents per calorie. If the junk food day includes a stop at McDonald's for a chicken McNuggets happy meal instead of the ham and cheese sandwich, the day has about the same number of calories, but costs \$8.16.

Contrary to popular opinion, the healthy day is not much more expensive than the calorie-laden, nutrient-poor day. If you want to quibble that the excess 17 ϕ cost for the healthy day is prohibitive, have at it. The point is that the perception that healthy food is *much* more expensive is ludicrous.

Both days used homemade meals: Using pre-prepared boxed or frozen meals of either healthy or junk food jacks up the price. Eating in restaurants clearly increases food cost, and where one eats determines how much for both types of food. Waste makes a difference also. Too many people let their produce rot in the refrigerator, increasing the amount spent per consumed serving. With prudent purchases, healthy food is attainable on a budget.

Cost of a standard serving of a few healthy foods (in Sacramento on May 20, 2007):

- 14 ¢ 1 egg
- 17 ¢ 2 Tbsp raw peanut butter
- 30 ¢ 1 oz. sunflower seed kernels
- 25 ¢ 8 oz. milk
- 50 ¢ 8 oz. yogurt (if purchased as a quart)

- 53 ¢ 3.5 oz. Atlantic salmon
- 80 ¢ 4 oz. lean ground turkey
- 14 ¢ Lean turkey bacon
- 33 ¢ ½ c. canned pinto beans
- 12 ¢ ½ c. navy beans (made from dry beans)
- 9¢ 1 c. barley (made from dry barley)
- 12¢ oatmeal
- 43 ¢ muesli
- 40 ¢ 1 medium sweet potato
- 15 ¢ 1 medium potato
- 2¢ rice purchased in bulk
- 25 ¢ ½ c. cooked greens
- 37 ¢ 2 cups spinach salad with chopped veggies
- 10 ¢ ½ c. cabbage
- 20 ¢ ½ c. broccoli
- 25 ¢ 4 oz. melon
- 75 ¢ large apple
- 29 ¢ ¼ c. raisins



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Health Resources and Services Administration has developed learning tools focused on physical activity and healthy eating for young and adult women. Wellness is the focus, not illness. The mental health tools are almost

finished - the physical activity and healthy eating tools can be downloaded at www.hrsa.gov/womenshealth.

DrG's MediSense Disclaimer:

Think first, before you act: Because you are an extraordinary manifestation of a tangle of unique genetic material, think first, before applying any or all of these articles' information to your life choices. Dr G's just trying to interpret medical and nutrition news reports for you - within the framework of information already known and the limitations of how the studies were done. Articles this size can't possibly contain every bit of information that was ever published on a subject. Distillation may leave some things out: Hopefully not crucial pieces. Don't crucify me if some new tidbit of information comes along that contradicts what I wrote. This newsletter offers some insight, not The Cure: It's not a doctor's prescription. PLEASE discuss any changes in therapy or lifestyle with your doctor. Subscribing to this

newsletter presumes that you accept your own risk when making decisions about your health.

HERB OF THE MONTH – 'SUGAR DESTROYER' GYMNEMA SYLVESTRE

By Ann Gerhardt, MD Subscribe at www.drgsmedisense.com 5/24/07

Bottom Line At the Top: Gymnema sylvestre probably lowers blood sugar and has few known side effects. When the leaf or powder comes in contact with the tongue, it makes food, especially sweets, taste horrible, thereby reducing calorie consumption.

Gymnema sylvestre has been used as a naturopathic and ayurvedic treatment for diabetes for nearly two millennia. Some use it for weight control. You might find it under other names - Gurmari, Gurmarbooti, Gurmar, periploca of the woods, meshasring or mesbasringi, all referring to a plant found in tropical forests and bushland of India, China, SE Asia, South Africa. The <u>Hindi</u> word gur-mar literally means sugar destroyer.

Scientists believe that a component of Gymnema, gurmenic acid, which has a structure similar to saccharose, is the active ingredient. How it affects sugar metabolism, when taken internally, is still a matter of debate. Gymnema alters the taste of sugar to a disgusting sand flavor when the leaf is chewed or the powder comes in contact with the tongue. The effect lasts only 15 minutes, but serves as a strong disincentive to continue eating even the tastiest sweet. In this way it might lead to weight loss. It is not clear if taking the herb internally has the same effect.

A number of controlled trials in both Type I (insulindependent) and Type II (insulin resistant) diabetics yielded promising improvement of blood sugar control. Both fasting and post-meal glucose levels decreased 11-35%, allowing some patients to reduce their doses of prescription medications. Some individuals' cholesterol and triglyceride levels fell also. No long-term studies have verified safety when Gymnema is consumed for prolonged times.

The herb comes in capsules of dried leaf or as a liquid extract. It is a common component of combination herbal diabetes products, but the majority of studies used GS4, a standardized product that contains only gymnema sylvestre. By convention, capsules should contain 25% gymnemic and gurmenic acids to be considered active.

The typical dose is 400 mg, once or twice a day. Since Gymnema lowers blood sugar, hypoglycemia (low sugar level) may occur, particularly if taken with other diabetic medications. It is not recommended in pregnancy, small children or lactating women.

Whenever I feel blue, I start breathing again.

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HIGH SCHOOL NUTRITION

ATTITUDES by Ann Gerhardt, MD Subscribe at <u>www.drgsmedisense.com</u> 5/24/07

It's amazing how the same talk given to two different groups of middle and high school kids can yield extremely diverse responses. At Christian Brothers High School two weeks ago I started each class by discussing some general nutrition and body image concepts, but then allowed most of the time for questions.

The class of thirteen year-old girls actively engaged in an open discourse about diet and weight. Questions tumbled out of their mouths, apparently unafraid of sounding simple or silly. Here was an opportunity to confirm, explain or refute the profusion of right, wrong or who-knows nutrition information that bombards them in magazines and media every day. Only a few, very quiet, almost sullen-looking, young women remained aloof. When they did answer, their answers were a little too perfect. (I worry about their risk of an eating disorder.)

At the opposite end of the class-participation spectrum, a mixed class of juniors and seniors required a virtual crowbar to elicit any response. The girls, especially, seemed mute. Questions from four boys, the only ones who felt like talking, ended up moving the discussion to sports nutrition. I could see their teacher, who seemed to be on a rampage against Jamba juice, grimacing. She wanted me to focus on nutrition quality and quantity, not what to eat before and after sports practice.

The 13-year-olds wanted to know about ideal body weight, what to say to a friend with an eating disorder, dietary causes of acne and how many calories it takes to metabolize protein. The older class - well, I just rambled on, because they really weren't asking questions.

I tried to engage both classes with questions requiring answers by a show of hands. Their responses to questions about why they eat what they eat, and their response to hunger and fullness, were ominous predictors of future continued on page 5

High School Nutrition Attitudes continued from page4

weight problems. Almost everyone affirmed that they always eat if they are hungry. Very few, though, stop eating when the hunger abates, preferring to finish it because it's there, or to keep eating because it tastes good.

They also eat when feeling sad, bored, angry, social or tired. One very candid girl admitted that she eats *less* when angry, because "why would I want to sit and eat with my parents, when I'm mad at them?" As teens, they accepted without question that emotions are valid reasons to eat. Their life IS emotion, and our society teaches that any feeling is fair game for caloric soothing. Most get away with it now by being high energy teens, involved in sports and talking with their arms.

I worry about these habits being translated into over- or under-eating throughout adulthood, so I hammered away at the concept of eating when physically hungry and stopping when no longer hungry. A few got it, including the teacher.

GET THE MOST OUT OF YOUR DR Find a Doctor Who Fits Your Style and Needs

by Ann Gerhardt, MD Subscribe at <u>www.drgsmedisense.com</u> 5/24/07

Doctors come in a variety of flavors:

Just-the-facts vs. Warm-and-homey.

Gruff vs. Effusive.

Egocentric vs. Self-effacing.

Brilliant vs Dull.

Conscientious vs Hope-anything-that-falls-thru-the-tracks-is-unimportant.

Practices-what-he/she-preaches vs Doesn't.

On time vs late.

Prescribe-the-latest-and-greatest vs Use-only-time-tested-therapy.

Patronizing vs. Deferential.

Some examples of One-Size-Does-Not-Fit-All:
One of my patients (call her Patience) sees a
psychiatrist, Dr Careful, who terminally frustrates her.
To effect any change, Patience must prod and push.
The psychiatrist's ultra-cautious style prevents her
from trying alternate medication, even when clear that
the current prescription is ineffective. Dr Careful
normally caters to special patients who are

exceptionally sensitive to medications, requiring slow changes of infinitesimal doses. Patience has no



illusions of being special: She just wants to feel better, now. On the other hand those 'sensitive' patients who are 'special' think that Dr Careful is the only one who understands them.

Some doctors are VERY thorough, recording every little bit of history and examination detail. Many patients like those docs, thinking that the doctor is actually doctoring, or will catch whatever is wrong in time for prevention or treatment. Others just want to be told they are well and to "keep doing what you are doing." Quite a few pilots and truck drivers like to get their license exam only from semi-retired docs who conveniently forget to ask pertinent questions: Questions like, "Can you hear out of both ears?" and "Has anyone ever told you that you have a heart problem?"

Patients differ in their preferences. For every type of doctor, there are patients for whom that type fits. Sometimes it takes a while to find your size doctor, but it pays off in the end if you keep looking.

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