Dr.G's medisense
ENJOY • LEARN • PONDER

Published by
Healthy Choices for Mind and Body
Written by Ann Gerhardt, MD

Volume 4 Number 4 November 2009

Putting medical and nutrition news into historical, scientific and just plain practical context.

Five issues per year. Request a free email subscription or information about sponsorship at: drg@healthychoicesformindandbody.org
Or send $18 for one year of newsletters to be mailed to you to: P.O.Box 19938, Sacramento, CA 95819.

Read past articles at
www.healthychoicesformindandbody.org

Sponsorship information, page 7
You can support the educational efforts of Healthy Choices for Mind and Body, by making a *tax-deductible contribution* to HCMB P.O.Box 19938, Sacramento, CA 95819

Contents:

2009 H1N1 Influenza & Vaccine

by Ann Gerhardt, MD *November 2009*

Since the first 6-month-old girl in Mexico contracted H1N1 influenza in April and the United States declared a public health emergency, the disease has generated controversy. For those who refuse to believe there's a problem, the low attack rate in the spring justified their skepticism. But the spring is usually off-season for flu. For the more than 1 million people infected by early August (still off-season), this was no fire drill. More than 1000 have died from it, and we haven't even hit peak flu season, December to February.

Outbreaks in Mexico and Canada each lasted about 3 months. Their epidemics peaked for only a few weeks. In Mexico 27% of those infected died, whereas 'only' 14% died in Canada. What's really scary is that the vast majority of influenza deaths has mirrored the 1918 flu pandemic, in which an extremely aggressive virus killed mostly young, healthy people. Like the 1918 virus, this year's H1N1 virus can cause a rapidly progressive

continued on page 4

Ovarian Cancer Screening

by Ann Gerhardt, MD *November 2009*

Bottom Line at the Top: Screening for ovarian cancer with the blood test CA-125 should only be done in women who have symptoms of possible cancer or who have strong risk factors for ovarian cancer. Otherwise a large number of women will have unnecessary surgery, with risk of complications.

Ovarian cancer accounts for 3% of cancers in American women, but is the fifth leading cause of their cancer-related deaths. That's pretty scary, given that ovarian cancer eludes diagnosis and resists treatment.

Most women aren't diagnosed until they have symptoms, which means advanced, Stage III or IV, disease. The symptoms are non-specific, like abdominal or pelvic pain, urinary urgency, abdominal distention or bloating, and early fullness after eating, so doctors usually think of other, more common, diagnoses first. Hence the usual, advanced-stage diagnosis, with poor outcome. Since advanced disease is rarely curable, women and doctors alike would love to have a marker that detects curable

continued on page 2

Ovarian Cancer Screening *from page 1*

Recent ovarian cancer scares have women emailing each other with pleas to undergo CA-125 screening to make an early diagnosis. CA-125 is a blood test that, when positive, often indicates the presence of ovarian cancer. For a disease that may be curable if found when it is localized disease and is usually fatal if it is plastered all over the abdomen, this test sounds like a no-brainer. The problem is that the CA-125 test result is not very sensitive or predictive.

CA-125 is positive in 80% of women with ovarian cancer. It is also positive in 1-2% of normal women and in a significant percentage of women with other abdominal processes, such as endometriosis, fibroids, pelvic inflammatory disease, hepatitis, pregnancy, normal menstrual periods, peritonitis, abdominal surgery and other cancers.

An 80% positive rate is high, but certainly not the absolutely sensitive marker we would like. And unfortunately, CA-125 doesn't do a good job of detecting curable cancer. Only 50% of Stage I ovarian cancers are positive for CA-125. Stage 1 cancers have a 90% cure rate, while Stage IV disease has only a 19% cure rate.

Much of the screening concept depends on the notion that the screening test will detect small, early and treatable cancers. There is no proof that ovarian cancer starts with Stage I and evolves to higher Stages over time. There is no early lesion, like a polyp, that signals likely progression to invasive cancer. Some cancers don't seem to have a primary focus of tumor, possibly starting instead as a burst of small tumors throughout the abdominal cavity. So it's not clear that screening would find a curable process.

The low prevalence of ovarian cancer – a life-time risk of only 1.4% of all women and a yearly incidence of 40 cases per 100,000 women over age 50 – requires that any screening test be sensitive enough to catch the positives and specific enough to exclude the non-cancer cases. It the test misses 20% of cancers, what good is it? Or if it falsely identifies even 5% of women who don't really have disease, that's 5% more who will risk the potential complications of invasive surgery, the only way to confirm or refute the presence of ovarian cancer.

A Swedish study found elevated CA-125 levels in 175 out

continued on page 4

2009 H1N1 Influenza

from page 1

pandemic, in which an respiratory failure refractory to intensive care.

While influenza-related deaths in the total population did not diverge from the usual pattern until October this year, children clearly have experienced the brunt of 2009 H1N1 devastation from the very beginning. The graph of children's influenza-related deaths clearly shows an unusual pattern this year. In 2007 and 2008 almost all deaths occurred in January thru March. This year has seen a surge of deaths in April-May and now again in October.

2009 H1N1 is an unusual influenza A virus that has acquired genes from both swine and avian influenza viruses, creating one that has never been seen before. Influenza viruses are either A or B types and have names based on two proteins, H and N, for short. Because viruses with the same H and N label may differ, they are named things like A/Bangkok. H1N1 viruses have come and gone, so they need names that distinguish one from another. That's why the current H1N1 virus is called 2009 H1N1.

2009 H1N1 influenza victims have symptoms not usually seen with the usual seasonal influenza. In addition to the usual seasonal flu symptoms of fever, cough, runny nose and horrific muscle aches, nausea, vomiting and diarrhea are common with 2009 H1N1. All influenza viruses spread in droplets of nasal discharge, sputum from an uncovered cough and saliva sprayed into the air every time an infected person says a word with a P or T. We also infect ourselves with virus by touching a contaminated surface and then touching our nose or mouth.

As of early October, almost all influenza illness this year has been caused by 2009 H1N1 influenza. Influenza A H3N2 and influenza B have caused only a few infections nationwide. From August 30 to October 24, 2009, there were 530 laboratory-confirmed influenza-related deaths; 25,985 patients were hospitalized with pneumonia and influenza; and there were 2916 deaths related to pneumonia and influenza syndrome. Deaths as a result of pneumonia and influenza accounted for 7.1% of all deaths, which is above the 6.6% epidemic threshold for the fourth week. (The statistics are a little hard to follow, since 2009 H1N1 appeared in April 2009, which is part of the 2008-2009 flu season. The 2009-1010 season started August 30, so infection and death counts started over.)

Seventy percent of those hospitalized with 2009 H1N1 were "high risk," meaning they are more likely to die or suffer complications. High risk people include children younger than 2 years, adults 65 years or older, pregnant women, women who have delivered a baby or miscarried

continued on page 5

Ovarian Cancer Screening *from page 2*

of 5550 women. Only six of those had ovarian cancer at surgery. Three other women with normal levels ultimately developed ovarian cancer. Elevated CA-125 levels were more likely to rise over time in those with cancer. So if initial clinical suspicion and elevated CA-125 levels aren't particularly high, serial testing might save some women from unnecessary surgery.

Advanced age (over 55 years) increases risk, but not enough to justify screening all older women. So far screening trials of large numbers of women over age 50 have not saved women's lives. In one trial combining CA-125 testing with trans-vaginal ultrasound, 10% of women turned up positive and 3.5% ended up having surgery, but only 5.1% of those had cancer (0.002% of the original group). Most of the cancers (75%) were Stage III and IV disease. Another 0.001% of the original group who tested negative on screening ended up with ovarian cancer. So screening led to a large number of unnecessary surgeries, missed a third of cancers and didn't detect particularly treatable cancers.

Newer trials combine CA-125 testing with trans-vaginal ultrasound and other blood tests. So far combined testing detects more ovarian cancers, but the other markers are even less specific for ovarian cancer than CA-125, so they identify more people without cancer, possibly subjecting them to unnecessary surgery.

Screening is more appropriate for women with risk factors, but 90% of women with ovarian cancer have no known risk factors. Having used oral contraceptives, been pregnant or breast-fed a child reduces risk. Having the BRCA gene mutation (which greatly increases risk of breast and ovarian cancer) or a family history of ovarian or breast cancer in the immediate family greatly increases risk for ovarian cancer. Extremely high risk women should consider having their ovaries and fallopian tubes removed as soon as they are done having children, rather than waste time with imperfect screening methods. ⚕

Resveratrol, Wine & Aging

by Ann Gerhardt, MD *November 2009*

It's not the alcohol in red wine that helps your heart – it's the bioflavonoids, naturally occurring compounds that confer health benefits. If you eat your vegetables and fruits, you get hundreds of them, with a wide variety of chemical structures and different effects in the body.

Red grape skins contain the bioflavonoid, which makes its way into wine and is credited with much of red wine's protective effect against heart attacks. Berries, plums and peanuts also contain resveratrol.

Latching on to one component or food (especially an alcoholic one) to the exclusion of myriad others seems to be a human trait (remember carotene and oat bran?). Since some studies find benefit with white wine, resveratrol and red grape skins can't be the only healthy parts of grapes.

But resveratrol is identifiable and marketable, so it has found its way into supplements. Why should we eat grapes, berries, plums and peanuts when we can eat a pill? No matter that there is no guarantee of purity and content.

Resveratrol boosts enzymes involved in aging. In animal studies these enzymes (named sirtuin) translate into longer life, delayed age-related decline in heart function and improved sugar metabolism, bone density and motor coordination. Calorie restriction does all those things too, but that's not as popular or lucrative as a pill.

We don't have human studies of resveratrol, but that hasn't stopped the supplement industry from marketing it. Pills contain 20-500 mg per tablet or capsule. Animal studies used resveratrol doses that would translate (for a 150 pound person) to 350-1450 mg/day. Wine has less than 40 mg/liter. Since drinking a moderate amount of wine, containing only a small amount of resveratrol, helps the heart, the bottle must hold other healthy components.

Becoming a lush in order to ingest more resveratrol would just be an excuse to get drunk. Too much alcohol from wine damages the heart, leading to heart failure. You wouldn't have a heart attack, but you would die early nonetheless.

Instead, eat plenty of berries, grapes, plums and peanuts. Taking reseveratrol pills instead of eating the fruit misses out on all the other good bioflavonoids the fruit contains. Even better, replace empty calorie foods with these and a variety of vegetables and fruits and perhaps live even longer. ⚕

2009 H1N1 Influenza *from page 3*

within the last two weeks, and those with underlying conditions that would make a bad outcome more likely. These conditions include taking medications like chemotherapy that suppresses the immune system, chronic lung, heart, kidney, liver, blood disorders, and diabetes. **These high risk people, along with healthcare workers who will have close contact with patients infected with 2009 H1N1 should be vaccinated.**

Vaccination: In response to a vaccine or being infected with a virus, we make antibodies which are very specific for the strain in the vaccine or causing the infection. Having antibodies to strain A/Brisbane/10/2007, which is like an H3N2 virus, won't protect against A/Brisbane/59/2007, which is like an H1N1 virus. Even an antibody against an older H1N1 virus won't protect against the 2009 H1N1 virus. This is why we need to be vaccinated every year. And it's why vaccine producers work very hard to predict which virus will cause infections in the coming year, and why they have to do a bit of guess-work for that prediction.

People worry about the risk of a hastily produced H1N1 vaccine subjected to little pre-market testing. The H1N1 vaccine is different from typical seasonal vaccines in that vaccine makers have in hand the specific virus they are trying to prevent. This takes the guess-work out of vaccine making. They take the actual virus and grow it in eggs, then inactivate (kill) it and package it in liquid for the vaccine. 2009 H1N1 is making life difficult for vaccine makers in that it's not growing quickly in eggs, slowing the time to produce the number of viruses needed for each dose.

Some of the reluctance to take the vaccine revolves around the accounts of increased risk for Guillain-Barré syndrome (GBS) associated with the 1976 H1N1 vaccine. In 1976 H1N1, vaccination added approximately 1 additional GBS case per 100,000 people receiving vaccine over the usual incidence of 140 cases per week in the U.S. Some attribute vaccine-related GBS to the "adjuvant" added to the vaccine to stimulate a better immune dose, increasing the supply of vaccine. The current H1N1 vaccines contain no adjuvant.

Thimerosal, a mercury-based preservative, is only used in multi-dose vials. Some believe that thimerosal causes behavioral problems in children. To eliminate exposure to thimerosal, get vaccinated from a single-use vial, which contains no preservative. If you experience a possible side effect other than runny nose or mildly swollen/red arm, report it to the U.S. Department of Health and Human Services Vaccine Advers Event Reporting System at http://vaers.hhs.gov/index.

The FDA has granted approval to four companies for their adjuvant-free vaccine. Sanofi-Aventis, Novartis and CSL Limited all make standard, injectable vaccine in single- or multi-dose vials. A single dose pre-filled syringe is also available from Sanofi-Aventis. The multi-dose vials contain thimerosal, the single-dose vials and syringes do not. MedImmuneLLC produces a live, attenuated, intra-nasal vaccine intended only for people aged 2 – 49 years.

Early vaccination data demonstrate good tolerance and a "strong immunologic response" when a single dose is given to healthy adults. The trial data with vaccine from Sanofi-Aventis showed a response rate of 96% in adults ages 18-64 years and 56% in persons older than 65 years. CSL Biotherapeutics' vaccine showed response rates of 80% in adults ages 18-64 years and 60% in persons older than 65 years. Older persons are expected to generate a lesser response. For most people a single adult dose should suffice. Older people with a lower expected antibody response rate need to avoid sick people, crowds and other people's cough and spit.

Most available data do not show any protection against 2009 H1N1 by the regular, seasonal flu vaccine. You should get the H1N1 vaccine if you are in one of the high-risk groups and don't have an allergy to eggs.

Treatment: 2009 H1N1 influenza infection responds to oseltamavir (Tamiflu) and zanamivir (Relenza) and is resistant to the older flu drugs amantadine and rimantadine. Antiviral medications can decrease the severity and duration of influenza illness and can lower the risk for severe illness, mortality, and other complications.

Rapid treatment also reduces the risk of others contracting the illness from sick people. This could attenuate the epidemic… as long as the virus is sensitive to the drugs.

Treatment works best if started within 48 hours of onset of symptoms. For someone with suspected influenza who also has risk factors for complications or deteriorating

continued on page 6

American Heart Association Finally Addresses Sugar

By Ann Gerhardt,MD *November 2009*

For the first time, the American Heart Association (AHA) has released a dietary recommendation concerning a nutrient other than fat, cholesterol and total calories. They suggest a specific upper limit of intake for added sugars, but the recommendation really targets soft drinks.

During the past 3 decades, calorie intake by Americans has increased an average of 150 to 300 calories per day without any change in exercise, contributing to bulging waistlines. Sugar-sweetened beverages and other liquid calories contributed about half of those extra calories.

Excessive sugar intake has been linked with several metabolic abnormalities, adverse health conditions, and deficiencies of essential nutrients. Greater intake of soft drinks is linked to greater energy intake, over-consumption of discretionary calories (ones that don't satisfy healthy food group requirements), higher body weight, and lower intake of essential nutrients. Regardless of energy requirements, added sugar consumption greatly exceeds discretionary calorie allowances recommended in the 2005 US Dietary Guidelines.

The AHA recommends decreasing added sugar intake to prudent upper limit of half of the discretionary calorie allowance. That's less than 100 calories (6 teaspoons) per day for most U.S. women and less than 150 calories (9 teaspoons) per day for most U.S. men.

Translating that into food might get hard, since a cookie serves up a lot of discretionary calories, only part of which is sugar. How does a non-mathematician figure what percentage comes from sugar? The calories that require no calculation, and the ones targeted by the AHA, are those in soda, since 100% of its calories are sugar.

One 12-ounce can of cola has approximately 8 teaspoons of added sugar, or roughly 130 calories. Other easy calculations: Each teaspoon of sugar has 16 calories and a tablespoon of syrup or honey has ~50 calories. You'll have to ask Starbucks how much sugar is in your Mocha Grande.╣

We Thank Our Donors

Ellen Aasletten
Kavid Kraus, MD
Carol Schanz
Virginia Woodfork

2009 H1N1 Influenza

from page 5

clinical status, treatment should not be delayed for the results of a nasal swab test for virus, which has at best 70% virus detection sensitivity. A later start may still reduce symptoms and duration of illness, particularly in people who don't seem to be getting better on their own. Only 0.4% of tested viruses are resistant to Tamiflu and Relenza.

Treatment or prevention with antiviral medications is not necessary for most previously healthy individuals who have flu-like symptoms, are recovering from influenza or have no symptoms but were exposed to someone with H1N1. Some people with a very high risk condition who are exposed to an influenza-infected person might take an anti-flu drug to ward off infection. However most doctors recommend that even these people wait until the first sign of symptoms to immediately start the drug.

Tamiflu and Relenza usually cause no side effects, but Tamiflu is associated with more nausea and vomiting, and it contains sorbitol, which may induce diarrhea. Inhaled Relenza may provoke asthma. Both are rarely associated with delirium or self-harm.╣

And those whose sponsorship appears in this issue

Support *Healthy Choices for Mind and Body* education efforts and DrG's MediSense with a donation of any size

Donor: $35 or more: You will be listed as a Sponsor in DrG'sMediSense Newsletter.
For $50 or more you will also receive a free "Life is Worth Living" bracelet, and a mailed copy of DrG'sMediSense Newsletter

Healthy Choices Advocate: $100 or more: All of the above, plus a free "This is a Natural Shapes T-shirt and WINS video/lesson set donated to the organization of your choice.

Healthy Choices Special Friend: $150 or more: All of the above, plus VIP entry to Healthy Choices for Mind and Body events.

Healthy Choices Education Patron: $500 or more: All of the above, plus a talk by Dr Gerhardt to the group of your choice (plus travel).

Name _____ Telephone _____

Address_____

Email _____

Donation amount _____

Make checks payable to:
Healthy Choices for Mind & Body
P.O. Box 19938
Sacramento, CA 95819

I do ____ do not ____ want my name listed as a sponsor in DrG'sMediSense Newsletter.

Check here ____ if you want to receive DrG'sMediSense Newsletter only by email.

Donors of $100 or more: I do ____ do not ____ want a "This is a Natural Shape" t-shirt.
Specify size: Small ____ Medium ____ Large ____ XLarge ____

Lesson set _____ to be sent to _____
Address _____

Contact HCMB at drg@healthychoicesformindandbody.org for information about sponsorship in DrG'sMediSense Newsletter.
Or leave a message at 916-457-3466

Healthy Choices for Mind & Body

Products and Services

"Healthy, Happy Shapes, It's Not How You Look, It's How You Feel"

35 minute video and set of 5 lessons. Each lesson accompanies a discrete section of the video. The 5 topics are Body image, Healthy Nutrition, Physical Activity, Psychological issues predisposing to eating disorders and Dangers of Eating disorders.

"Positive Body Image and Healthy Bodies" WINS Grade School Lesson Sets

Each containing lessons that address healthful eating, physical activity, self-esteem, media image vs. reality, and natural body shape acceptance.
Grades 1 & 2: Lesson book, teacher background information with video, & classroom posters.
Grades 3 & 4: Lesson book, teacher background information with video, student video & classroom posters.
Grades 5 & 6: Lesson book, teacher background information with video, before and after pictures that illustrate photographic touch-up techniques & classroom posters.

Classroom and community talks for all ages.
Booth posters and educational activities for health fairs.

Healthy Choices for Mind & Body

Mission: **Promote the vision of a world in which all people practice healthy lifestyles by:**

1) **Educating children and adults to understand the components of healthy lifestyles and how to incorporate those components into their own lives;**
2) **Changing standards of beauty and health to those that do not define us by our weight and do not promote eating disorders, including anorexia, bulimia, binge eating disorder, and compulsive overeating that may lead to obesity; &**
3) **Interpreting health-related news within the context of existing medical knowledge to enable individuals to apply it to their own lives.**

Newsletter 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 this newsletter's information to your life choices. Dr G's just trying to interpret medical and nutrition news 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 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. 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. Feel free to send questions or comments. Feedback and change are goo