

# AGROMEDICINE PROGRAM UPDATE

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## PROGRAM NOTES

>It has been more than fifteen years since our last survey of primary care physicians regarding their care for tick-borne diseases and spider bites. We plan another survey in early 2005 covering the calendar year 2004. We will again limit ourselves to a one page, fax back survey instrument to optimize response rates.

>I have just completed two chapters (“The Agricultural Environment” and “Pesticides”) for a new “Manual of Agricultural Medicine” edited by Dr. James Lessinger, a long-time friend of the SC Agromedicine Program. The book will be published by Springer-Verlag in 2005.

>In addition to speaking to community, church and civic clubs on lay-oriented topics (Skin Cancer and Sun Exposure, Herbal Remedies, Health Maintenance on the Farm, Food Safety and Food Quality, Genetically Modified Foods, and others), we are also happy to speak to medical audiences on tick-borne diseases, foodborne illnesses, health

effects of mold exposure, etc. Please call us if you need a speaker.

## RECENT CONSULTS

### >**Bothered by mold**

The high humidity of our summer and early fall along with visits from, or at least passing contact with tropical storms have left the state with high levels of mold/mildew—leading to multiple calls to the Agromedicine Program office. Most are concerned with health effects of mold exposure. The bottom line is that there are, as far as we know now, irritant and allergic health effects. Irritant effects happen in non-allergic individuals who are exposed to a high mold burden. Symptoms include eye, nose and throat irritation, sometimes leading to a dry cough. Treatment is symptomatic, with the addition of drying the environment as much as possible (40-50% relative humidity) to decrease mold activity.

Truly allergic individuals have symptoms similar to those listed above, but a much lower mold exposure

levels. Bronchospasm may also be produced in these individuals. Treatment is with anti-histamines, beta-agonist inhalers, and, in severe cases, inhaled or systemic corticosteroids—in addition to drying the environment.

There is no reason for mold species identification, irritant and allergic symptoms respond regardless of the particular mold involved

### >**Worried about Vikane**

A patient with a history of “chemical sensitivity” called with a concern about exposure to materials used to treat a drywood termite infestation. The pest control operator (PCO) planned to use Vikane (sulfuryl fluoride) with chloropicrin in a tent. Vikane is a colorless, odorless gas which has been used as a fumigant for control of termites for more than 20 years. Chloropicrin is an intensely irritating, tear gas-like agent used as a warning agent with odorless fumigants like Vikane.

The Vikane and chloropicrin are released into a tent built around the structure to be

treated. After a few hours (3-72, depending on the job) the tent is opened by the PCO and fans are placed in the structure. After six hours, air samples are checked for residual Vikane. If none is detected, the client can return to the structure. There is no residual left by the chemicals. The absence of a residual is valuable for those who consider themselves "chemically sensitive." The fumigants do their jobs and are diluted by air to the level of harmlessness.

### >Stung by fire ants

A caller reported having been stung approximately 30 times on one foot by fire ants approximately 3 weeks earlier. She had returned to her home in New England shortly after the stings. She initially developed only the characteristic sterile pustules which resolved over a few days. As the swelling resolved she noted a mild tingling sensation in the foot and aching in her lower leg. She saw a physician in her hometown who ordered a B12 level and an MRI of her head (apparently considering multiple sclerosis). Both were normal. Symptoms are now resolving.

Those of us who have seen many patients with similar symptoms post-multiple stings are saying to ourselves-- "No wonder medical costs are up!"

Does she need hyposensitization therapy? Probably not. She had no symptoms

distant from the site of the stings, so no indication of systemic allergy—and no need for hyposensitization.

## FROM THE LITERATURE

### >Shift work and cardiovascular risk

Researchers from Maastricht University in the Netherlands<sup>1</sup> have attempted to look further at the reasons for increased cardiovascular risk in shift workers compared to daytime workers. Previous studies have suggested a relative risk of 1.4 for cardiovascular disease in shift workers. Studying a group of almost 250 shift workers and 157 daytime workers over one year showed a minimal change in body mass index (a less than 0.5 kg/m<sup>2</sup> decrease in shift workers compared to daytime workers) and no significant change in lipid parameters. Cigarettes smoked per day increased significantly in shift compared with daytime workers (+1.42 and -1.03, respectively). This may explain, at most, only a part of the excess cardiovascular disease risk reported in shift workers. Knutsson and Boggild, in another article on this subject, conclude that social factors, stress, and behavioral variables may play a role, but the disturbance of circadian physiological rhythms as a consequence of night work also are probably relevant.

<sup>1</sup> Van Amelsvoort LGPM, Schouten EG, Kok FJ. Impact of one year of shift work on cardio-

vascular disease risk factors. JOEM 2004; 46(7): 699-706

### >Insect sting venom immunotherapy

A study from the Johns Hopkins Asthma and Allergy Center addresses the question of "outgrowing" allergy to insect stings<sup>2</sup>. Over 1000 children diagnosed with allergic reaction to insect stings were contacted an average of 18 years later. Fifty percent responded. They had had an average of 3.5 years of venom immunotherapy. Forty three percent had been stung again. Systemic reactions occurred less frequently in treated patients (3 percent) versus untreated (17percent).

They concluded that a clinically important number of children do not outgrow allergic reactions to insect stings, but that venom immunotherapy in children leads to a significantly lower risk of systemic reaction to stings even 10-20 years after treatment is stopped.

This study certainly supports our recommendation for venom immunotherapy (when available) for any person who has symptoms distant from the site of an insect sting (bee, wasp, hornet, or fire ant)

<sup>2</sup> Golden DBK, Kagey-Sobotka A, Norman PS et al. N Engl J Med 2004; 351(7):668-74

**DON'T FORGET TO VOTE  
ON NOVEMBER 2<sup>ND</sup>!**