

AGROMEDICINE PROGRAM UPDATE

MUSC DEPARTMENT OF FAMILY MEDICINE – DIVISION OF PUBLIC HEALTH AND PUBLIC SERVICE
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Program Notes

➤ Agromedicine Selective

Ten first-year MUSC medical students began a selective with the Agromedicine Program on September 18. The objective of the selective is to introduce the students to related areas of agricultural and medical sciences. The students are required to attend weekly seminars presented by faculty from MUSC and Clemson University through November 13. Each student is also required to research a topic in agricultural medicine and to present it at one of the seminars.

➤ Case History: Urticating Caterpillar

Three men working outdoors sought medical attention after they brushed against bushes on which caterpillars were feeding. The three reported severe stinging and inflammation of the skin that came into contact with the caterpillars. The symptoms continued for 90 minutes after expo-

sure at which time they went to a local clinic for evaluation.

One of the men identified the insect as a salt marsh caterpillar. Mature caterpillars are about two inches in length, straw or brown in color, and are covered with long, upright hairs. They are found throughout North America and are prominent in the fall.



Salt Marsh Caterpillar
Estigmene acrea (Drury)

There are numerous species of urticating caterpillars. Body hairs contain a toxin that is secreted when the caterpillar is handled and the hairs may break off and become embedded in the skin. This is the first report received by the Agromedicine Program of a salt marsh caterpillar causing urticaria. A search of the medical literature did not find any confirming reports.

The clinic nurse consulted with the Agromedicine Program for treatment recommendations. She was advised to repeatedly apply cellophane tape to the men's skin to remove any caterpillar hairs that may be embedded. Ice was also recommended along with Ibuprofen for the pain.

➤ Guest Lecturer

Dr. William M. Simpson, Jr. spoke on October 13 at the 2002 Central Coast Medical Update held in Newport, Oregon. His topic was "Pesticide Poisoning."

Diet and Cancer: Did You Know? by Dr. Stanley Schuman

- Dietary factors, including obesity and alcohol, account for 30% of cancers in western countries.
- Developed countries have much higher incidence rates for cancers of the breast, lung, colorectum, and prostate, compared to developing countries.

- Developing countries have higher cancer rates for cervix, liver and esophagus than developed countries.

- People who migrate from one country to another generally acquire cancer rates of the new host country. This epidemiologic fact suggests that acquired habits of diet and life style may outweigh predisposing differences between populations including heredity and ethnicity.

- Stomach cancer was once the most common cancer in the world, but decreased dramatically in western countries with better sanitation (less *H. pylori* infection), refrigeration (less salt, smoke and pickling preservation of foods), and more fresh fruit and vegetables in the diet.

- Increased incidence of obesity and diabetes may predispose to breast and colorectal cancer due to cellular-metabolic effects of excess insulin in susceptible people.

- The results of 30 years of nutritional research yields few specific dietary preventatives for cancer. Prospective population trials should shed light on dietary factors affecting specific cancers in men and women.

- In the past 40 years in Japan, meat consumption has increased seven-fold (from 10 grams per person per day to 70) and colorec-

tal cancer has increased five fold (from 10 cases per 100,000 per year to 50). Cereal intake (including rice) decreased 40%.

- Many countries are increasing dietary intake of dairy products, vegetable oils, fruit juice, alcohol, and meat with decreasing intake of starchy staple foods (wheat, potatoes, rice, and maize).

“At present, prudent advice is to maintain a healthy weight, restrict alcohol consumption, and select a conventionally balanced diet ensuring an adequate intake of fruit, vegetables, and cereals.”¹ Beware the health claim-of-the-month based on the latest food fad, vitamin, or dietary supplement.

¹ Key TJ, et al. *The effect of diet on risk of cancer: a review. Lancet 2002; 360:861-868.*

Behavioral Prevention of

Three Causes of Death?

by Dr. Stanley Schuman

Fifty years of nutritional research in population studies in developing countries are implicating poor diet and lack of exercise as preventable causes of premature death from coronary heart disease (CHD), type 2 diabetes, and certain cancers.^{2,3}

J.I. Mann cites the good news in the U.S. of declining CHD rates, compared to E. European countries, Ireland, and Scandinavian countries. He credits the

U.S. gains to “changed macro nutrient levels (including fruits and vegetables and folic acid additives), reduced cigarette smoking, improved treatment of risk factors (including prescribed statins and hypertension medications) and treatment of acute cardiac events.” On the other hand, Mann warns that increasing levels of obesity can lead to more diabetes (type 2), and reversal of the decline in CHD mortality. The contributions of laboratory, clinical, and epidemiologic studies are documenting clear benefits of life-style change which can reduce CHD death rates by 30%, and diabetes incidence rates in population trials by 58%, respectively. Still, how likely is it that governmental promotion of life-style changes will alter the habits of susceptible segments of the population?

A better alternative is for individuals and their clinicians to focus on positive personal health behaviors. In Mann’s words, “Now that the principles have been clearly established, innovative approaches to life style changes should be one of the greatest priorities in health in our time.” A common-sense approach to diet and exercise with its 3-in-1 benefits should be hard to resist, for one and all.

²Mann JI. *Diet and risk of coronary heart disease and type 2 diabetes, a review. Lancet 2002; 360:783-789.*

³Key TJ, et al. *Diet and risk of cancer, a review. Lancet 2002; 360:861-868.*